☞Read Advertisements in the Journal Advertiser.

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THE

SAINT LOUIS Medical and Surgical JOURNAL.

THOS. F. RUMBOLD, M. D.,
EDITOR AND PROPRIETOR.

HIRAM CHRISTOPHER, M. D.,
ASSOCIATE EDITOR.

MAR 1

ESTABLISHED 1843.

SAINT LOUIS:
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See Index to Advertisements Page xxvii.

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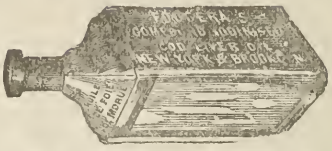
COMPOUND  IODINISED

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Used with great success against nervous and convulsive coughs, Whooping Cough, Acute Bronchitis, Chronic Catarrh, Influenza, &c

Wakefulness, Cough, and other sufferings in Consumption, are greatly relieved by the soothing and expectorant properties of this paste.

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These new pills and granules are the only real improvement made in pills for many years. While they are a novelty, their principal claim to superiority lies in the fact that they have undoubted advantages over all other pills, and are at once the **perfection of accuracy,** and a **safeguard against mistakes or substitution.** Their claim to the confidence of the medical profession and pharmacists rest, on the **entire purity of the ingredients used ; perfect accuracy of composition and uniformity of size ; ready solubility ; tastelessness and harmlessness of the coating,** which is vegetable ; **perfect preservation in all climates ; entire security against mistakes or substitution,** every pill or granule **having printed upon its surface** either its common name or its composition, as Pil. Cath. comp., or Pil. Quin. 1 grain.

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Since the introduction of Pepsine by Boudault in 1854, **Boudault's Pepsine has been and is still considered the most reliable,** as is attested by the awards it has received at the Exhibitions of 1867, 1868, 1872, 1873, and *in 1876 at the Centennial Exposition at Philadelphia.* Careful tests will enable any one to satisfy himself that *Boudault's Pepsine has a digestive power at least double* that of the best Pepsines in the market, and that it is really the cheapest.

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Medal of Merit.

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A laxative, refreshing, and medicated Fruit Lozenge, agreeable to take, and never causing irritation. Its physiological action assures the immediate relief and effectual cure of **CONSTIPATION** CEREBRAL CONGESTION, HEADACHE, INDIGESTION, BILE, HEMORRHOIDS, etc., etc., by augmenting the peristaltic movement of the intestines without producing undue secretion of the liquids. Unlike pills and the usual purgatives, it does not predispose to intestinal sluggishness, and the same dose always produces the same effect, that is to say, never needs increasing. These properties render "Tamar" invaluable to the weak and debilitated, and especially to ladies previous and subsequent to their accouchment. It is recommended by the most eminent Physicians of Paris; notably Drs. BERLIN and TARDIEU, who prescribe it constantly for the above complaints, and with most marked success.

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PEPTODYN,

The New Digestive, is a combination of whole digestive secretions----Pepsine, Pancreatine, Diastase, &c.,

Forming an invaluable remedy in the treatment of all forms of Dyspepsia, and all diseases arising from imperfect nutrition.

N. B.—*The success of this Remedy has led to several imitations of it,* which consist largely of Milk Sugar, and, as compared with Peptodyn, are of little or no real value as digestive agents.

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THOMAS M. MARKOE, M.D., Professor of Surgery.
T. GAILARD THOMAS, M.D., Professor of Obstetrics and the Diseases of Women and Children.
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THOMAS T. SABINE, M.D., Adjunct Professor of Anatomy.
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EDWARD CURTIS, M.D., Professor of Materia Medica and Therapeutics.
FRANCIS DELAFIELD, M.D., Adjunct Professor of Pathology and Practical Medicine.
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WILLIAM H. DRAPER, M.D., Clinical Professor of Diseases of the Skin.
CORNELIUS R. AGNEW, M.D., Clinical Professor of Diseases of the Eye and Ear.
ABRAHAM JACOBI, M.D., Clinical Professor of Diseases of Children.
FESSENDEN N. OTIS, M.D., Clinical Professor of Venereal Diseases.
EDWARD C. SEGUIN, M.D., Clinical Professor of Diseases of the Mind and Nervous System.
GEO. M. LEFFERTS, M.D., Clinical Professor of Laryngoscopy and Diseases of the Throat.
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CHAS. KELSEY, M.D., Ass't Demonstrator of Anatomy.

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MATTHEW D. MANN, M.D., Lecturer on Clinical Microscopy.
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T. A. McBRIDE, M.D., Lecturer on Symptomatology.

The COLLEGIATE YEAR embraces a special *Spring* and a regular *Winter* Sessione attendance at the latter only being required for the graduating course. The Spring Session begins near the middle of March, and continues till June 1st. *The Regular Winter Session* for 1878-'79 begins October 1st, and continues till March.

TUITION is by the following methods:--

I. DIDACTIC LECTURES.—During the *Winter Session*, from five to six lectures are given daily by the Faculty. Attendance obligatory. During the *Spring Session*, two lectures are given daily by the Faculty of the Spring Session. Attendance optional.

II. CLINICAL TEACHING.--Ten clinics, covering all departments of medicine and surgery, are held weekly throughout the entire year in the College building. In addition, the Faculty give daily clinics at the larger City Hospitals and Dispensaries (such as the Bellevue, Charity, New York, and Roosevelt Hospitals, the New York Eye and Ear Infirmary, etc.,) as a regular feature of the college curriculum. Attendance optional.

III. RECITATIONS are held daily throughout both Sessions. Attendance optional.

IV. PERSONAL INSTRUCTION.--Cases of *Obstetrics* are furnished without charge, Personal instruction is given in *Practical Anatomy, Operative Surgery, Minor Surgery, Physical Diagnosis, Ophthalmology, Ology*, and *Laryngscopy*. Attendance optional, except upon Practical Anatomy.

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For the Annual Catalogue and Announcement, or for further information, address JOHN G. CURTIS, M.D., Secretary of the Faculty, College of Physicians and Surgeons, corner of Twenty-Third Street and Fourth Avenue, New York.

SAVORY & MOORE, beg to call the attention of the Profession to some of their Special Preparations, the purity and uniform strength of which are Guaranteed.

PANCREATIC EMULSION.

Prepared in accordance with the direction of the Physician who introduced this purely

Medicinal Food for Consumption and Wasting Diseases.

Pancreatic Emulsion will always take precedence of Cod Liver Oil by reason of its introducing the STABLE SOLID FATS INTO THE SYSTEM instead of the evanescent fluid fats or oils.

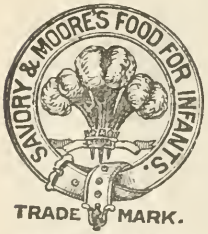
Neither Cod Liver Oil nor EMULSIONS OF COD LIVER OIL can supply the kind of fat necessary for sound and vigorous human life. In addition to this, all the Oily Emulsions are liable to rancidity, and most of them are highly objectionable in consequence of the SAPONIFICATION and ULTIMATE PUTREFACTION, produced by the chemical agents used instead of Pancreatic Juice.

Pancreatic Emulsion (properly so-called), is THE NECESSARY FOOD FOR THE CONSUMPTIVE, and the most reliable form of nutriment for counteracting the tendency to Phthisis and other wasting diseases. It presents to the lacteals fat in essentially the same condition for assimilation and absorption as in a vigorous human frame, and THE AGENT of the important change is THE NATURAL SECRETION of the PANCREAS.

Pancreatic Emulsion, may therefore be regarded as Chyle obtained by nature's own process. In certain cases both Cod Liver Oil and Pancreatic Emulsion are required—one to supply the blood with oil or liquid fat, the other with the more stable solid fats; but it cannot be too strongly urged that both PANCREATIC EMULSION and Cod Liver Oil are *not to be regarded as Medicines, but as articles of diet*, without which patients, with their defect of health, will as surely starve as healthy persons would if deprived of the most nutritive part of their food.

Pancreatine, effects the digestion and assimilation of Cod Liver Oil and Fat, as well as Food generally. This palatable and popular remedy is therefore invaluable to PATIENTS WHO ARE UNABLE TO DIGEST COD LIVER OIL, and who are thus deprived of its nourishing and invigorating properties.

BEST FOOD FOR INFANTS!



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"They constitute one of the most energetic *anti-spasmodic* and *hypnotic* medicines."—*Gazette des Hopitaux*.

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Dr. Clin's Capsules contain 4 grains, and the Dragees 2 grains, of genuine Bromide of Camphor.

N. B.—*Dr. Clin's Gluten Capsules* are very rapidly dissolved in the stomach, and should be preferably employed for a long treatment, and when the administering of Bromide of Camphor at a great dose would be considered as beneficial.

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THE SEVEN SPRINGS
Iron and Alum Mass.

In the "salts" or solids of "Mineral Water," obtained by evaporation, from the waters of a group of seven springs, in Washington county, Virginia. Notwithstanding these springs are less than 30 yards apart, no two of them possess the same medicinal properties. The mass obtained from the reduction of these waters, as analysed by Prof. J. W. Mallet, of the University of Virginia, contains *nineteen* distinct, well proportioned alkaline properties, the combination of which seem to possess unusual therapeautic virtues—as the physicians, as well as the thousands of non-professionals have learned by actual experience.

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As may be inferred from the nature and character of this remedy, it is neither a *patent* nor *proprietary* preparation, but as there are several other preparations of similar character now being manufactured in Virginia, we would advise all who order, to mention the "Seven Springs Iron and Alum Mass," prepared by Landrum & Litchfield.

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"I have found no one single remedy to yield such satisfactory results in the treatment of *Chronic Gastric Catarrh*, as the "Iron and Alum Mass." In *Chronic Diarrhœa*, in *Anæmia, Chlorosis*, and for *Chronic Eczema*, I deem it invaluable, associated with appropriate topical treatment. GEO. T. HARRISON, M. D., 221 W. 23rd St., N. Y.

"In an interesting case of *Menorrhagia*, accompanied with symptoms of *General Debility, Dyspepsia, Copious Uterine Leucorrhœa* and *Retroversion of the Womb, etc.*, the experiment was sufficient to satisfy me of the virtue of the "Iron and Alum Mass," to relieve this class of female diseases, far superior to the Dialysed Iron, now so greatly lauded as a tonic. FREDERICK HORNER, JR., M. D., Surg. U. S. N.

"I have been using the "Iron and Alum Mass" in several very important cases. In the treatment of *Hemorrhœa, Chronic inflammation of neck of bladder*, Ulcerations of the *Mouth* and *Throat*, and Dyspepsia, it seems to act with specific virtue.
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I consider the "Iron and Alum Mass" a very valuable remedy for all diseases dependent upon deranged conditions of the secretions of the liver and kidneys.
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☞The "Iron and Alum Mass" is for sale by nearly all respectable druggists. Retail at $1.00 per bottle, or six bottles for $5.00. Sent by mail on receipt of price, postpaid. Orders sent to us, or any of the following wholesale druggists, will receive prompt attention.
1878.

LANDRUM & LITCHFIELD, Abingdon, Va.

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The chief object of this institution is to furnish a retreat to that class of the insane whose education, social relations, and habits of life render indispensable more home-like comforts than can be commanded in the public asylums.

More than three hundred persons have already enjoyed the benefits of the institution, and fourteen States are at this time represented by one or more patients in our wards.

The location of the hospital is admirable in every respect. Situated in the midst of a highly cultivated country, five hundred feet above the Ohio river, the air is pure and wholesome at all seasons. The buildings are spacious, perfectly ventilated, thoroughly furnished, heated with steam, and lighted with gas.

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A separate and distinct building is provided for the care and treatment of epileptics.

To Dr. W. S. CHIPLEY, formerly Superintendent of the State Lunatic Asylum at Lexington, Ky., is confided the exclusive control of the medical and moral treatment of the inmates and the general management of the institution. The number of patients will be limited so that each one will have the benefit of treatment by the superintendent personally.

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Starling Medical College,

COLUMBUS, OHIO.

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The Preliminary Course will begin September 4th, and continue four weeks.

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Three Clinics will be given whekly during the term including the Preliminary Course. ANATOMICAL MATERIAL ABUNDANT.

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Graduation Fee	25.00

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Address, FRANCIS CARTER, M. D., Dean, or H. G. LANDIS, M. D., Sec'y, Columbus, O.

To the Medical Profession.

LACTOPEPTINE

The most important remedial agent ever presented to the Profession for Indigestion, Dyspepsia, Vomiting in Pregnancy, Cholera Infantum, Constipation, and all Diseases arising from imperfect nutrition, containing the five active agents of digestion, viz.: Pepsin, Pancreatine, Diastase, or Veg. Ptyalin, Lactic and Hydrochloric Acids, in combination with Sugar of Milk.

FORMULA OF LACTOPEPTINE.

Sugar of Milk	40 ounces	Veg. Ptyalin or Diastase	4 drachms
Pepsin	8 "	Lactic Acid	5 fl "
Pancreatine	6 "	Hydrochloric Acid	5 fl "

LACTOPEPTINE owes its great success solely to the Medical Profession, and is sold almost entirely by Physicians' Prescriptions. Its almost universal adoption by the profession is the strongest guarantee we can give that its therapeutic value has been most thoroughly established.

The undersigned having tested LACTOPEPTINE, recommend it to the Profession.

ALFRED L. LOOMIS, M.D.,
Professor of Pathology and Practice of Medicine, University of the City of New York

LEWIS A. SAYRE, M.D.,
Professor of Orthopedic Surgery and Clinical Surgery, Bellevue Hospital Medical College.

F. LE ROY SATTERLEE, M.D., Ph.D.,
Professor of Chem. Mat. Med. and Therap. in the N. Y. Col. of Dent; Prof. of Chem. and Hygiene in the Am. Vet. College, etc.

SAMUEL R. PERUY, M.D.,
Professor Materia Medica, New York Medical College.

A. VAN DEVEER, M.D.,
Albany, N. Y., June 8th, 1878.
Prof. of the Prin. and Prac. of Surg., Albany Med. Col.; Surg. Albany and St. Peter's Hospitals.

"I have given LACTOPEPTINE a good thorough trial, and have been greatly pleased with the excellent results that have followed its administration."

JOHN H. PACKARD, M.D.,
Philadelphia, Pa., May 30th, 1878.
Prest. Pa. Co. Obstet. Society; Surg. Episcopal and Women's Hospitals.

"I have found great satisfaction in the use of LACTOPEPTINE, and have ordered it frequently in cases of Dyspepsia, especially where there is want of tone and defective secretion."

JAS. AITKEN MEIGS, M.D.,
Philadelphia, June 26th, 1878.
Prof. of the Institutes of Med. and Med Juris., Jeff. Med. Col: Phy. to Penn. Hos.

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Cincinnati, O., June 21st, 1878.
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Quinine, Arsenic and Nux Vomica.	
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THE

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ARTICLE XI.

GENESIS—VIII. By HIRAM CHRISTOPHER, M. D., of St. Louis.

The general belief as respects the value and importance of antisceptics in surgical as well as medical practice—a belief that seems pretty well confirmed by experiment—is based on the supposition that microscopic organisms do really occasion putrefaction. That they are the cause of some destructive diseases is a matter of experimental knowledge; and that they have some connection with putrefaction seems to be an equally well ascertained fact. It is hence, esteemed a matter of very great importance in surgical practice to destroy their germs, or prevent their action by means which are supposed to do one or the other. Since the contact of the air, and the consequent disposition of these organisms on an exposed surface, cannot be prevented, the effort is made to counteract their influence by antisceptics which are supposed to act in one or both of these ways. The success of the practice thus far certainly favors the views of Prof. Tyndall and implies the correctness of his conclusion—that there is, and can be no putrefaction or decomposition of organic sub-

stances, if the presence or action of the germs of these organisms be prevented.

Now, as these living organisms are observed to grow and reproduce while in contact with organized substances, the inference seems evident, and, indeed, necessary, that the organic body affords them the food on which they grow. Their growth and reproduction prove that they nourish. And since putrefaction is a universal attendant on their presence, it is thought to sustain to the nutrition of these organs the relation of cause and effect. And since, also, experiments have shown that no putrefaction takes place when the germs of these organisms have been effectually excluded, Prof. Tyndall declares that they are the true, real, and, indeed, only cause of putrefaction. This would affirm the absolute dependence of decomposition on the vital process of nutrition, as its cause. Hence, though putrefaction is not truly a nutritive process, yet it is dependent on it, and to that extent and degree, that the two processes are indeed inseparable. This is a grand generalization, and shows that life and death are much more closely connected in their phenomena than was ever known before. Such a relation or connection was not even suspected.

These things being so, the fact that decomposition is effected only through the nutrition of living organisms, has a very important bearing on the question under discussion; for if it be true—and Prof. Tyndall says it is—it shows that, as nutrition is necessary to the decomposition of organized bodies, the agency of living organisms is absolutely necessary to the return of the elements that constitute the fabric of these bodies, to their native realm. And the fact further shows the utter inadequacy of physical agents alone to effect this purpose. These things being so, the theory that assigns to physical forces the origin of living beings, is shown to be utterly absurd and supremely preposterous; for, if they cannot decompose an organized body, how insane to suppose that they can compose one;—that they can originate what they cannot even destroy! This is a most important and significant fact and suggests:

1. That organic bodies are much more stable in their composition or structure than has been generally supposed. We have been led to believe, as heretofore observed, that organic bodies, and especially those of the quarternary series, are very unstable; that they readily, or spontaneously fall to pieces under the action of physical forces alone; and that the elements which com-

pose their fabric, are held together by the presence of the vital power alone, their decomposition was regarded as a simple physical process, by which atoms seek their inorganic or natural relation, and as a gradual falling away from the organic to the inorganic. That any other different process was connected with it, either as essential or accidental, was never conjectured. The fact was not even suspected before it burst upon the mind as a discovery. There was no anticipation or conjecture that foreshadowed its approach. It came as a revelation, and presented the phenomena of death in a new light. It tells us that there is no death without life, no decay without growth, and no putrefaction or decomposition without nutrition and construction. As spontaneous generation has been proved to be impossible, so it now appears as equally well established, that spontaneous decomposition is also impossible. The presence and agency of a living agent are now proved to be necessary to both. The experiments of Prof. Tyndall seem to place these facts beyond successful contradiction.

But it may be urged that, if physical agents are not the exciting cause of decomposition, they are, at least, necessary to it; that living organisms cannot effect decomposition without their assistance. This is fortunately true, and is an evidence of an intelligence and wisdom that understood the nature of living organisms and their power for good or ill, and wisely adapted means to the end; and when we consider the vastness of the work of the organic world, we can but believe that nothing less than infinite intelligence and wisdom were adequate to make such provisions and adjustments as are presented in the phenomena of life and death. If no physical conditions or agents were necessary to the action of living organisms, what we now know of their power and agency would justify the opinion that all things had indeed, come by chance, since they would, if not affected by physical agents, be utterly subversive of the economy of nature. But it was wisely provided that excessive heat or cold should destroy the germs or prevent their action on organic substances. They cannot live and grow except under proper physical conditions; and as physical agents, are, to a great extent, within the control of man, he can prevent these organisms from doing harm. But physical agents in such cases prevent injury by these germs by producing such conditions as makes their growth impossible. Reduce the temperature to a certain degree, and there

will be no manifestation of life. The degree of cold may not destroy the germs, but it certainly prevents their germination and growth; and as it is only by their germination and growth that decomposition is effected, so, when the vital functions are held in abeyance, no putrefaction takes place. The same result follows when antiseptics are used. How these act we may not know. They may not destroy the germs as fast as they fall into the putrescible fluid. They certainly render it incapable of fermentation or putrefaction, and very probably by destroying the germs in their germ state. To a drop of beef tea in which hundreds of bacteria were seen moving with the vigor of growth, I added a drop of a saturated solution of common salt and all motion ceased. The bacteria were killed. About a year ago I made a mucilage of gum tragacanth to which I added at the time some salicylic acid, and a few cloves. To-day, no organisms appear in it as far I can see. These facts show that we have the means of preventing the development of germs, and the decomposition of organic substances by the agency of antiseptics. Germs cannot develop and grow except under proper physical and vital conditions, and hence decomposition can take place only when these conditions are present. But this is no ground for denying their necessary agency in decomposition. On the hypothesis that physical agents alone are the causes of decomposition, the same or similar conditions are necessary. Oxygen will not combine with an oxidizable element except at a certain temperature; and heat alone was not regarded by the old theory as sufficient. Oxygen was esteemed as absolutely necessary. Physical conditions are, indeed, necessary to all forms of life, and hence the fact that they are necessary to decomposition, does not militate against the fact, that living organisms are the real and necessary agents in the decomposition of all organic substances.

In the second place, the fact that living organisms are the agents in the decomposition of organic substances suggests that it was necessary at the beginning to provide for the complete return of the elements that constitute the organisms of living beings and the organic matter which they form, lest the world should ultimately become overstocked with living beings and organic substances, and thereby give rise to such a train of evils as would make the further introduction of living creatures undesirable or impossible. Such a special provision was imperatively necessary, since, as now discovered organic bodies do not undergo

spontaneous decomposition on account of a natural instability of constitution, nor are decomposed by physical agents alone. Were they readily decomposable, either spontaneously, or by physical agents, it is hardly probable that this order of living organisms would have been created. If they were solely designed for the work in which we find them engaged, this work has proved sufficiently great in all ages of life on the globe to have justified their creation in such vast numbers. As it seems almost certain that organic substances cannot decompose without their agency, we may rationally conclude that they were designed for this purpose. It would, therefore, appear that only life can undo the work of life. So stable does its work appear, that it seems to resist, with the greatest obstinacy, even this agency. It yields only by degress. When sugar becomes the pabulum of the microscopic plant, it does not surrender its integrity at once. It grudgingly yields a part to nutrition, and surrenders a part to the inorganic world, and falls back to a lower body. It is composed of $C^{12}\ O^{10}\ H^{10}$, and in the struggle comes off only as alcohol $C^4\ O^6\ H^2$. The rest has gone to the the support of the plant, and into carbonic acid (CO^2). How long the alcohol will remain unchanged under the influence, or the ordinary action, of physical agents alone, we know not. So with the secondary products of the nutrition or putrefaction. All of them are not purely inorganic bodies; and just how long and obstinately they resist physical agents, has not yet been ascertained. As the less stable, or more complex, are not decomposed except by the agency of living organisms; and as no organisms have been discovered that feed on these secondary series, we might infer that these reach the inorganic world only by the excessive action of physical agents, as a high degree of temperature.

The nature of the process of the combination of elements in the organic kingdom, and by means of living organisms—cells for instance is that of food-making—*artopoiesis*. This is effected by plants, and in parts specially set apart for this work. The great mass of pabulum we now find in the world, or that has existed in the world from the beginning, was prepared by the leaves of plants, inorganic material undergoing in their structure, and under the influence of heat and light, such interochange between their elements as to form organic products, while a part passed back into the world of matter. In this, the

process of *artopoiesis* resembles the process of nutrition. The secondary process is nutritive. The food passes from the leaf into the general circulation, and after contributing to the nutrition of the organism, disappears as pabulum; and then out of the process of nutrition come "formed matter," and partially and wholly decomposed matter.

The same are the results of nutrition in the case of microscopic organisms. As nutrition is a vital process, all living beings take part in the work of the decomposition of life's products, because nutrition is the natural means by which decomposition is effected. The microscopic beings come in as the last agents in the work, and seem to have been especially designed to complete the work left by the higher forms. This is a beautiful and wonderful provision, demonstrative of infinite intelligence and wisdom. Human reason, were it a thousand times greater than it is, could never have conceived such a thing; much less could blind and passive physical forces have originated it. A system of reproduction was absolutely necessary to the end the author of nature had in view. This system itself was a conception beyond the range of human reason. There was no phenomenon in the inorganic world that could have suggested it, had human reason been assigned such a work; far greater is the ultimate purpose contemplated by the system, and which lay so many ages in the future. Besides, the actual working of this system was beset with difficulties of a very serious nature, and which rendered it imperatively necessary that such evils should have been provided for; that means should have been provided, which would effectually or in part mitigate or prevent them. Such a provision was made at the beginning; and there is no better or more convincing evidence of infinite intelligence and wisdom than the provision that ordained that the evils should be mitigated or prevented by the same means that gave rise to them. This provision was living organisms. Nutrition underlies the processes of growth and reproduction. It is the latter that gives rise to the evils of overproduction and excessive accumulation of organic substances, and nutrition is the means by which these results are prevented. It consumes one fabric while building up another; but it can use and does use but a part of the nutritive material. The residue appears as inorganic matter, or of organic bodies lying just without the realm of matter. Living organisms are so constituted that life products are necessary to their growth, and when they

mature, they reproduce. Nutrition and reproduction are complimentary of each other; the one is dependent on the other. So also reproduction and decomposition. The former supplies the deficit created by the latter, and the latter regulates the quantity of supply; but nutrition is the substratum of all these processes; the function on which rest reproduction and decomposition. These conclusions seem well confirmed by the phenomena of fermentation and putrefaction, heretofore regarded as disintegrating processes, but now known to be nutritive. As, then, living organisms are the agents by which the decomposition of organic bodies is effected, we find that they accomplish their work through the natural operation of their vital functions.

In the putrefying carcass the fly lays its eggs. These, finding a suitable nidus in the fluids of the carcass, hatch, and the larva is born. Thousands of these appear in various parts of the putrefying body, and we may observe them from day to day. We can see that they grow, and we hence infer that they feed on the carcass. There may be feeding on the same carcass, and at the same time carrion birds or quadrupeds. All these agents of destruction are visible to the unassisted eye. But if we examine a drop of the fluid taken from the carcass under a magnifying glass, we perceive that the drop of fluid swarms with living forms as active as the restless larva. All these living beings are engaged in the destruction of the carcass, and long after bird and quadruped and larva are gone, the bacterium may be found finishing the work of consumption; and finally only the bones are left. These being inorganic matter, share the fate of all such substances. If no bird or quadruped or insect had taken part in the work, the bacterium alone would finally accomplish the work; but after much longer time. If the presence of bacteria be prevented, what happens to a vial of an effusion of a part of the substance when properly prepared and hermetically sealed, as detailed by Prof. Tyndall, will happen to the whole carcass. If all other scavengers are excluded, the whole body remains; so that without the interference of these scavengers the reproductive system would long since have filled the earth to repletion with its products. It would appear then, as a demonstrated fact, that the destruction of living organisms is affected only by means of living organisms. Nutrition is both a constructive and destructive process. It destroys in building up, and in building up is preparing the material of other living organisms, they in turn

to repeat the process that has been going on since the creation of the first plants, the primary artopoietic organisms; the beginning of life and all its phenomena on this earth. On the work of the leaves of the plants primarily rests the life of plants and animals. Through the operation of the reproduction system comes the production of individuals, to which there is no practical limit but the supply furnished by the leaves of plants, and no protection against the evil of over-production but consumption. Such is the constitution of nature, a work of infinite complexity, and yet one of the greatest simplicity; a work that could have been designed and executed only by infinite wisdom and intelligence.

ARTICLE XII.

ORTHOPEDY.* By W. BEDFORD CRAIG, M. D., of St. Joseph, Mo. Professor of Anatomy, Lecturer on Orthpedic Surgery, St. Joseph Hospital Medical College.

MR. PRESIDENT AND GENTLEMEN OF THE DISTRICT SOCIETY:

I feel incompetent to the task assigned, although appreciating the honor conferred by requesting me to prepare and read an essay before an audience composed of representative men of our profession, those of recognized talent and ability.

However, wishing to contribute my mite to the advancement and success of our organization, which even now, in the beginning of its fourth year, is prosperous and flourishing, and is destined to become one of the first in the State in numbers and intelligence, I am prompted to offer this sketch of the history of modern orthopedic surgery.

You are aware that the profession is fast being divided into specialties, more particularly in the East. I need only to refer to to the names of Thomas, Emmett, Lusk, Sims, and the late Dr. Peaslee, as co-laborers in the field of gynæcology; Flint, Loomis Da Costa, the venerable Alonzo Clark, in practice; Gross, Mar

*An essay read before the District Medical Society of Northwest Missouri, convened at St. Joseph, Mo., July 11th, 1878.

koe, Sands, and James R. Wood, in surgery; and Detmold, Bauer Sayre and Adams, in orthopedic surgery, to verify this statement. And in the West, this practice of specialties once so cried down, is becoming frequent, and the gentlemen engaged in them recognized by the most orthodox practitioners of medicine and surgery.

The term "orthopedy" is generally considered to mean in its broadest acceptation, the correction of deformities existing in the human frame, from its etymological signification, being derived from the two Greek words *orthòs*, straight, and *paideúō*, I educate; and does not pertain to the correction of deformities of the feet alone. Therefore, its derivation from the above is preferable to that from the word *pedes*, meaning feet, giving, as it does, a greater latitude, for by correcting deformities of any character whatever we educate them straight.

This much neglected branch of the science and art of surgery was formerly entrusted to charlatans and quacks, who, by promising something wonderful, so worked upon the sympathies and credulity of the *ignobile vulgus*—the masses—that much injury was done, not alone to suffering humanity, but to the professional world, and the latter were much to blame, owing to the fact that they either knew of nothing to do for the deformed, as a rule, or would not take the time and exertion to accomplish anything curative in nature for them. The profession became accustomed, therefore, to recommend these patients to an instrument maker, and he in turn arrogating somewhat of ability to himself, and backed by the doctor, gradually assumed the title of orthopedic surgeon, in its mechanical sphere at least.

Another obstacle to the proper understanding and elevation of orthopedy to its standard of excellence, is the neglect of college faculties to create separate professional chairs by means of which the student is better prepared to understand and treat such surgical maladies, the number of which is quite large. To Bellevue Hospital Medical College is due the honor, I think, of establishing the first special chair for orthopedy in America, which professorship Dr. Lewis A. Sayre so ably fills.

The practice of this important branch is prevented from becoming universal on account of the difficulty of procuring orthopedic apparatus, as well as the expense, especially in the West, at a distance from instrument makers. But of late, the orthopedic armamentarum comprises less costly, cumbersome apparatus, and

consists of inexpensive, light appliances and means, as hip and knee-splints, club-foot shoes, plaster of paris and silicate of soda bandages, felt, adhesive plaster, etc.

Orthopedy never assumed the position of a separate, distinct branch of surgery until the publication of the work of Prof. Andry, of Paris, in 1741.

To him, then, is due the distinction, and he has been justly styled the founder of it, being the first to comprise all deformities of the body under one head and apply this comprehensive term.

In 1789, Philenius described the operation of division of a contracted tendo-achillis. Scarpa, in 1803, was the first to apply an apparatus to a distorted foot.

Stromeyer, in 1830, performed subcutaneous tenotomy for the relief of talipes and established it as a principle in operative surgery. The names of Bruckner, Heine, Dieffenbach, Langenbeck, Delpeck, Malgaine, Little and others stand conspicuous, as each labored hard to advance and develop scientific knowledge and orthopedic surgery, the latter of whom is pre-eminent in that he introduced this art in England, and by his energy and ability gave it a permanent footing as a department of general surgery.

Let us come across the waters and see what American surgeons have accomplished in this field of science. As a matter of record we see the name of David L. Rogers in conjunction with J. R. Wood, as being the first to perform tenotomy in the United States. The latter divided the tendo-achilles in 1834. In 1837 Dr. Detmold, well-known to you all as a surgeon of great ability and zeal, introduced subcutaneous myotomy among our people. Being of German descent, and having studied the teachings of Stromeyer in Germany, by such opportunities afforded him he could not but become conversant with the minutest details of the art. Let me read you a paragraph or two from Valentine Mott's "Travels in the East and in Europe."

He says: "It was my happy lot, even at my advancing time of life, to have resided in this capital (Paris), and to have witnessed also the dawning, as well as the meridian splendor of another new and illustrious era in the healing art; I refer to that beautiful and exact science, limitedly denominated Orthopedic Surgery. This great improvement, both in mechanical and operative surgery, is destined to be to the human frame wha

vaccination is and has been to the human features. As the discovery of Jenner has rid the world of a loathsome pestilence, and banished from our sight those disfigurations which make the most lovely lineaments and complexions hideous to behold, so will orthopedic surgery, by its magic touch, unbind the fettered limbs, restore symmetry to the distorted form, give mobility to the imprisoned tongue, and directness to the art of vision."

"Like many others of the glorious achievements of surgery, it is based upon such simple and self-evident principles that it cannot but be attractive, and carry home conviction to the plainest capacities. Its adoption, therefore, must be universal, and the more so because liberally and extensively as the knife may be used, untwisting, as it literally does, the most misshapen, revolting, and convoluted masses of deformity, by dividing deep, yet safe, under the skin, through the thickest and broadest muscles; yet are these operations, in many instances, almost free from *pain* and without a *drop* of *blood*."

I would not forget the name of Barwell as one to whom we are indebted for many new and useful discoveries and inventions, prominent among which is the application of elastic tension in the treatment of paralytic varieties of club-foot.

As the introduction of subcutaneous tenotomy by Stromeyer, in 1830, marked a new era in orthopedy, so did the application of elastic force to contracted muscles, by Mr. Barwell, of London; and it is an established principle of the art that constant persistently applied force of elastic nature will accomplish, in many instances, as much as tenotomy, provided the muscles be contracted, not contractured, that is, undergone structural shortening.

The tension should be so applied as to approximate the origin and insertion of the muscles that are paralyzed, and secure *in situ* by pieces of tin held in permanent position by adhesive plaster and rubber bandage. By so doing we can imitate the action of any muscles in the body, and restore the part to perfect symmetry by taking the place of the paralyzed ones until such a time as by the use of manipulation, galvanism, and other auxiliary means of treatment, they are capable of acting for themselves and retaining the parts in position and proper relation to one another. The proof of the efficacy of this principle is well illustrated by the fact of its almost universal adoption and application to the treatment of deformity resulting from

paralysis. Our most common and generally used club-foot shoes bear the insignia of this movement of reform by the presence of rubber tubing so arranged as to approximate the origin and insertion of weakened muscles.

There is a cause of deformity which has been overlooked by the profession, until pointed out by Dr. Sayre, that is, congenital phymosis and adherent prepuce.

This condition is accompanied, in many instances, by almost constant excitation of the genital organs, which irritation eventuates in reflex paralysis and consequent deformity. The exact pathological condition of the spinal cord is not known, as opportunity has not been afforded for autopsy, yet we would incline to the belief that anæmia plays an important part in this condition, as excessive venery is conducive of a similar condition of both cerebro spinal and circulatory system. Dr. Sayre's attention was first called to this subject, early in February, 1870, by a note from J. Marion Sims, requesting him to visit his office at his earliest convenience to examine an interesting case. Dr. Sayre immediately repaired to the office, and investigated what eventually proved to be a very instructive one. The patient, a child five years of age, was of an exceedingly white and delicate appearance, and unable to walk without assistance or stand erect —his knees being flexed at an angle of 45° or thereabout. Dr. Sims suggested the propriety of tenotomy of the hamstring tendons. However, after careful examination, they concluded that the deformity was due to paralysis and not contraction, and it was necessary, therefore, to restore vitality to the partially paralyzed extensor muscles rather than to cut the apparently contracted flexors. While applying electricity to the upper portion of the thighs, his attention was attracted to the penis, which by contact with the clothing or the hand, was in a state of almost perpetual erection. He found the glans imprisoned by a tight adhered prepuce, and the urethra red, swollen and protruding, being covered with granulations, and at once it suggested itself that circumcision would give prompt and decided relief. This operation he performed on the following day, and the child began immediately to improve, so that in a short time it regained complete control of the lower extremities, could walk, run, and was perfectly well, and this without iron, cod liver oil or electricity. Since then he has met a number of cases, and in all the operation proved highly satisfactory. It has been my lot to have

seen several such cases, one in private practice, the others in that of Dr. Sayre.

If I mistake not, some gentleman of this Society has reported a similar case to the one I have described, which he claimed was promptly cured by circumcision.

Talipes.—The deformity known by this name has been so frequently discussed that little remains to be said save concerning the recent progress made in treatment.

First, let me say, that the seat of Talipes has always, until recently, been supposed to be at the ankle-joint, and it is due to Sayre that the honor be accorded him of establishing by positive evidence the error of this position, and the fact that it is situated really at the medio-tarsal articulation. The only exception to this rule is the variety of club-foot known as Calcaneus. It undoubtedly is a deformity situated at the astragalo tibial articulation.

Sayre claims, therefore, and I think very correctly, "that the ankle-joint does not permit of the least *lateral* motion," consequently, the deformities, consisting of lateral deviations or rotations of the foot, must occur at some point anterior to this articulation. The malleoli so surround the astragalus as to permit of the motion of flexion and extension only.

Turning the toes in or out is due to the rotation of the leg and thigh at the hip joint, or the revolving motion of the fibula produced by the biceps and tensor vagina femoris, contracting when the leg is flexed upon the thigh.

The variety called *Equinus*, (excepting that produced by traumatic contraction of the gastrocnemius and soleus muscles) consists of no alteration in position at the ankle-joint, but of an appreciable drooping of the anterior portion of the foot, and the heel is little, if at all removed from, and can easily be restored to its normal relation to the leg. Calcaneus, as mentioned before, is the only deformity that can be said to occur at this joint, being due to a paralytic condition of the three muscles controling this articulation.

Varus and Valgus, also, consisting as they do, of rotation of the anterior portion of the foot inward and outward, have their seat at this compound articulation, the medio-tarsal. He offers a further authentical reason to substantiate his position: "That of the twelve muscles of the leg which move the foot, nine, namely, the tibialis anticus, extensor proprius

pollicis, extensor longus digitorum, peroneus tertius, flexor longus pollicis, flexor longus digitorum, tibialis posticus, peroneus longus, peroneus brevis have their insertion anterior to the medio-tarsal function; and but three, the gastrocnemius, soleus and plantaris, posterior to this joint; these three muscles have a common insertion by means of the tendo-achillis into the os calcis." It is but natural to conclude from the reasons just quoted, that any deformity dependent upon an abnormal condition of these three muscles, must have its seat at the articulation moved by them, the ankle and calcaneo-astragaloid.

That if any of the nine muscles are diseased, the result will be a distortion anterior to the medio-tarsal joint. This rotation of the foot, as accounted for by Sayre, has met with great opposition at the hands of the profession, and is rejected by some men of acknowledged ability. Dr. Gross says, when endorsing the little hand-book on "club-foot," written by Prof Sayre, before his work on orthopedy: "I shall still continue to make lateral motion at my ankle-joint, without rotating my hips, or revolving the head of my fibula."

After the introduction of subcutaneous tenotomy by Stromeyer, no other treatment was thought proper or ever instituted for the relief of the several forms of club-foot. It marked a new era in orthopedy, and was in many instances attended with remarkable success, and is to-day productive of the greatest good. However, as time passed on, surgeons found that many of their cures by tenotomy were imperfect, and in a number of instances relapsed into their former pathological condition. In fact, they soon became conscious that however useful and brilliant this operative procedure might be, it was not applicable to all varieties of Talipes; and from a study of their etiology and pathology the rule should be reversed. That instead of all distortions of the feet being spastic in nature, due to abnormal muscular contraction, they were of a paralytic origin and character, and therefore it became necessary to look for the diseased muscles, not on that side of the leg toward which, but on that from which the foot is distorted. In Equinus, instead of the gastrocnemius and soleus being spastically contracted, the muscles on the anterior aspect of the leg are paralyzed; in Calcaneus, the gastrocnemius and soleus are paralyzed; in Varus, the peroneals, chiefly; in Valgus, the tibialis anticus and occasionally the long flexor. The exceptions being a few spastic ones—and a

spastic engratted upon a previous existing paralytic. The question often arises, when to cut and when not. Sayre answers this very plainly and concisely. Place the part contracted, as nearly as possible in its normal position, by means of manual tension gradually applied, and then carefully retain it in that position; while the parts are thus placed upon the stretch, make additional point pressure with the end of the finger or thumb upon the parts thus rendered tense, and if such additional pressure produces *reflex* contractions, that tendon, fascia or muscle must be divided, and the point at which the reflex spasm is excited is the point where the operation should be performed.

If on the contrary, while the parts are brought into their normal position by means of manual tension gradually applied the additional point-pressure does not produce reflex contractions, the deformity can be permanently overcome by means of constant elastic tension, and the more you cut the greater the amount of damage done.

He makes this distinction the more evident by using the technicalities, "contracture" and "contraction." A contractured muscle being one that has undergone such peculiar anatomical change that renders it incapable of relaxation and elongation. A contracted one is capable of elongation, having undergone no structural change. Contracture is the physiological result of contraction. Dr. Little expresses this condition by the term "structural shortening." In the first instance, no force short of rupturing its fibres will elongate the muscle and correct the deformity; recourse must therefore be had to tenotomy or myotomy. In the second, constant elastic force persistently applied will elongate it and correct the distortion, consequently subcutaneous division will be deleterious.

However, a smaller amount of injury will produce the disease in a sickly, strumous child, than in a healthy, robust one; but he does not run the risk of injury that the latter does. Therefore the majority of cases of hip disease, or joint affections, occur in the healthy, restless, active children, say of 75 per cent. at least.

The principles of treatment are alike for all joint diseases. Rest, extension, counter extension, antiphlogistic measures.

Effusion is best combated by compression. When inflammatory action is high, absolute rest is beneficial, motion injurious.

When, however, it is chronic in character, motion is conducive of the greatest good, rest is absolutely deleterious.

Sayre has invented an appropriate splint for each prominent articulation, and they are light and inexpensive, compared with their efficacy, and need but to be seen to be appreciated. I have now a case that has worn his short hip-splint, with an exception of three weeks, since last November. Every two or three months the plaster had to be removed and fresh employed. Now, from a condition of perpetual pain and misery, she is transformed into that of perfect ease and comfort, showing conclusively that extension is indicated above everything else in such cases. The instrument will soon be useless and will be removed.

EXSECTION.—The possibility of the removal of the upper extremity of the femur was first suggested by Charles White in 1769. But Schmalz was the first surgeon who attempted it for the relief of morbus coxarius. In his case, however, the head of the bone was found loose in the acetabulum and only required removal. In 1818 Anthony White performed his celebrated operation which is generally quoted as the first successful exsection for morbus coxarius. From 1818 to 1845 the operation was performed by only two surgeons, Hewson, of Dublin, and Textor, Sr. Mr. Ferguson has operated five times.

Dr. Sayre was the first to perform exsection in this country. He has repeated it fifty-nine times. By referring to his excellent text-book on "Orthopedy," a minute description of his operation can be seen; likewise a tabulated report of these fifty-nine operations with complications and results. Thirty-nine of these patients are now alive, he says. Of these, twenty recovered with motion, and less than one inch shortening; eight recovered with motion and more than one inch shortening; two recovered with anchylosis, and nine are under treatment with every prospect of good results. Twenty of these cases are dead. Of these eight had recovered from the operation some time previous to death, which was caused in each case by some other disease entirely foreign to the operation. Of the twelve remaining four died from acute intercurrent diseases, as tetanus, dry sentry, double pneumonia and sunstroke. This leaves eight cases only who have died from the exhausting effects of hip disease without some intercurrent complication. Mr. Holmes claims "that the operation of exsection has grounds for adoption from its success in saving life, where natural cure seems improb-

able." According to Dr. Taylor "the mortality is not increased by the operation; if cured, they are cured more speedily." Dr. Poore states that of ten exsections done by him only one can be considered cured. Anchylosis of hip, (section of femur) Mr. Adams claims for his operation (section of the neck of the femur with a subcutaneous saw); that "in a large proportion of the cases operated on, the subcutaneous division of the neck of the thigh-bone proved to be as harmless an operation as subcutaneous tenotomy." He insists upon the importance of operating on suitable cases only. In the fatal instances he thinks the operation was ill judged. He has collected twenty-two cases of his operation; of these two died, one of pyæmia and one of secondary disease. When successful, the operation seems to have been followed by no unfavorable symptoms.

It has now been decided that the distortion should be corrected immediately after tenotomy, adhesive plaster and board generally being the means resorted to to retain the parts *in situ*. When, however, it is evident that operative procedure is not required, elastic force or tension must be employed to gradually restore the parts to a normal position. For this purpose "Barwell's Dressing," or the club-foot shoe may be used; the former, where locomotion is impossible, the latter, when your patient is old enough and able to walk. Sayre has modified the scarpa shoe, by placing a joint opposite the medio-tarsal, thus rendering it applicable to all cases of varus or valgus; and by borrowing the method of Barwell, applying rubber muscles to take the place of paralyzed ones, thereby constituting an universal shoe. I neglected to state, however, that this joint in the shoe was an enarthrodial or ball and socket; but should we be content with cutting tendons or apply an appropriate apparatus we would fall far short of attaining a perfect result. A cure, then, depends more upon the auxiliary means of treatment than upon any operation resorted to, however beneficial it may be.

Prominent among these I would mention manipulation, or that fanciful term "massage," which only means handling or shampooing the parts—electricity, hypodermics of strychinia, etc. Time does not permit a more thorough consideration of these auxiliaries.

Resection of the tarsal bones has been spoken of lately as a curative agent in bad cases of equine varus or valgus; but these operations have not been performed frequently enough for

one to judge of their efficacy; still, after considering the fact that in many cases, the normal facets and relation of these bones have become permanently alterated or obliterated, and new ones formed, it would seem perfecly justifiable under all circumstances to resort to some operation to restore symmetry to parts that had already resisted every other procedure known to our art.

CURVED TIBIA—SECTION OF BONE.—This operation was introduced by Jobert and has met with great favor at the hands of orthopedic surgeons, the saw and chisel being the instruments used. The Germans prefer the latter, the English the former, introduced through an opening made by a small tenotome. In all instances antiseptic precautions were used, union occurring from four to six weeks after the operation. Barwell has performed it twice, Boeckel thirty four times. The result was good in all cases.

Quite rapid advancement has been made, also, in the treatment of joint diseases, yet they are diseases that are poorly understood and as poorly managed by many who are otherwise most skilled surgeons. We are often called upon in such cases to amputate at the ankle, knee or even hip-joints, for what was at first a spraining of the ligaments of the joint, considered by many as a very trivial affair; or if not amputated, to combat pyæmic symptoms, or to mitigate the pangs of dissolution.

The terms "white swelling," and "scrofulous diseases" of the joints are frequently used to express an idea of a systemic contamination, which is more illusory and vague than the existence of the man in the moon. I mean in a vast majority of instances. Examination of cases as they present themselves to notice will convince any candid observer that the cachectic condition so often seen, is the result and not the cause of the disease. As morbus coxorius is a favorite hobby upon which those theorists ride, who believe in the "king's evil" origin of everything, we will confine our remarks briefly to its etiology and treatment. Very many of the patients in the early stages of this disease possess all the appearances of robust health, and where nature perfects a cure, they are, subsequent to it, hale and hearty. What then becomes of the scrofula in their system? The very fact of their becoming healthy and vigorous, after going through all the exhausting effects of hip-joint disease, proves that it is not of a constitutional origin. Likewise in many cases the joint has

been exsected, when the patient was apparently at the point of death, and, after the removal of the dead bone, became a strong, healthy subject. This is very strong evidence of its local or traumatic origin. Then again by treating the disease locally, without the least referenc to a vitiated constitution, we secure perfect results; so much so, that the patients recover with perfect motion and without the slighest deformity. This is sufficient to my mind to destroy the theory of purifying the blood to reach a localized affection. I have had ample opportunity to test these points in etiology and treatment, having two such cases under treatment at the present time, and I have yet the first patient to give iodide of potassium and other anti-scrofulous medication, unless you consider cod liver oil and chalybeate tonics as alteratives. Anæmia being a prominent symptom of joint affections, it is among the first things we combat, and that by local means calculated to relieve local irritation and disease. Iron enriches the blood, supplying the life sustaining principle; the oil acts as a nutritive, being easily assimilated by many.

The result in the successful cases was excellent. Mr. A's patient was able to walk seven or eight miles two years after the operation. He has never obtained motion after section of the femur. This has occurred to Jessop, Sands and Lind. Section of the femur below the neck has been reported in the last year by Golding Bird, Hamilton and others. In all the cases the operation was successful, and attended by little constitutional disturbance. The chisel was the instrument used. Two cases of death from section of femur below neck have been reported in the last twelve months. One occurring to Dr. Bryant, the other to Dr. Porter, Surgeon to the Massachusetts General Hospital. Both used the chisel. Fracture by brisment force and the osteoclast has been executed for anchylosis at this joint, the result being a useful limb in an improved position.

Sayre reports a case of artificial hip-joint, which has created considerable comment. Bauer, in his work, denies the existence of this joint as shown by the specimen obtained after death. Dr. Sayre has secured the certificate of those who examined it, among them Austin Flint, Jr. His operation consists in an incision about six inches long, made over the trochanter major in the axis of the limb. The periosteum being cut, a chain saw divides the bone above the trochanter minor, for obvious reasons removing

a curved shaped piece; the lower segment is then divided transversely, its edges rounded off, the incision closed, and left to the *vis mediatrix naturæ*.

CURVATURES OF THE SPINE—ANTERO POSTERIOR OR ANGULAR, AND LATERAL OR ROTARY LATERAL.—Much progress has been made in this portion of the field of orthopedy, and from the rack and screw we have advanced to the *elegant plaster dressing or jacket* of Sayre. We can best judge of this rapid improvement in the treatment of spinal diseases, by noticing the comments and criticisms found in recent medical journals upon Dr. Louis A. Sayres' new work on "Spinal Diseases and Curvatures."

The *American Journal of Medical Sciences* has, in the April number the following: "Every one who would familiarize himself with the pathological facts concerned in antero posterior curvature of the spine, must go back to the writings of Percival Pott, but he need go no further, and it is upon the facts he first demonstrated, and the theories and treatment he proposed, that accretions have gone on accumulating until we have the advanced science of to-day, the last development of which, in this particular direction, is to be found in this little book, while Mr. Pott was the first to point out that the deformity and paralysis in these cases depended on destruction of the bodies of the vertebræ (caused by tuberculous degeneration). He shared the antiphogistic opinions of his time, and confined his treatment to the use of derivatives in the form of setons and issues, applied on either side of the spinous processes, and kept open for a long time. A later pathology has taught us that where tubercles do exist, the most hopeful plan of treatment is that which consists largely of tonics, fresh air and nourishment. Of late years, the wonderful progress of the mechanical arts has exerted an important and beneficent influence within the domain of surgery, and as the opinions of our predecessors have been proved erroneous in many particulars, there has been more and more attention directed to the proper mechanical treatment of spinal curvatures, while the existence of constitutional depravity has received its proper share of attention. But Sayre has taken a new departure, and his views of the pathology of spinal curvature are in direct opposition to the opinions once held by all, and yet stoutly maintained by many.

While he does not altogether deny the existence of scrofula, he entirely excludes it as a factor concerned in the production

of spinal curvature, and provided the proper mechanical treatment is adopted, seems to regard with indifference the question of systemic taint. Even when he prescribes cod liver oil and other nourishment he is very particular to inform us that it is with no idea of combating a scrofulous diathesis." (Here follows an argument in favor of the alterative properties of the oil).

The method of treatment (by plaster jacket), for we do not like to call it an invention, has that essential element of simplicity, without which the most ingeniously devised mechanical appliances rarely become available in practice. With reasonable care, and that attention to details which every competent practitioner of medicine soon learns to bestow upon any plan of treatment he adopts, there is no reason for failure, and if evidence of the usefulness of Dr. Sayre were wanting, it would be furnished by his true statement, "that his method does away with the necessity of sending patients long distances to obtain skilled treatment at the hands of a specialist, for any properly, that is, regulary educated physician, should be able to make the application at home, and obtain perfectly satisfactory results there, quite as good as if the patients were under the hands of Dr. Sayre himself." Here follows a description of its application, with which you are all conversant. In conclusion, the reporter says: "We have been compelled to smile at some of the author's peculiarities of style, and have had to dissent from him in some matters of taste, but such trivialties, while they mar the book, do not affect the value of its substance and conclusions."

The method introduced by Dr. Sayre is one which cannot be too highly commended, as we cannot conceive of a case, suited for treatment at all, in which it is not likely to prove advantageous. Without being over sanguine we may reasonably indulge in the hope, that the day is not far distant when our eyes or those of our successors will not so frequently be pained at the sight of deformity produced by the ravages of antero-posterior curvature of the spine, when the wan face and unhappy expression of its victims, shall not so often testify to lives embittered and tempers soured by the sufferings of the body and anguish of mind consequent upon the unchecked progress of Pott's disease.

Although we do not look upon the process of Dr. Sayre as presaging the advent of millenial happiness, for we know that many cases will persist to an untoward result, despite the best treatment, yet there is no pleasanter occupation for a lover of our race,

than that of contemplating every fresh evidence of the progress our science is making in the alleviation of human misery. While day dreaming may be somewhat out of place in the sober pages of a medical review, yet in the face of decided advances in treatment, we can well understand some one speculating upon the effect that this or that discovery, if made earlier, might have had on the events of history. It has been said that dyspepsia has decided the fate of nations, and in view of Dr. Sayre's method of treating spinal curvature, we can fancy the same person suggesting that had the third Richard been treated with a plaster jacket in his youth, the fate of England might have been different, and the world have lost a character which under the magic touch of genius has given delight to every reader of Shakespeare. Wherever Dr. Sayre has gone he has been received with great respect and honor on many public occasions. His visit to Europe last season was a perfect ovation. *Braithwaite's Retrospect* for January contains quite a lengthy article from that noted surgeon, Richard Barwell, of London, quite commendatory of the plaster jacket. The *Boston Medical and Surgical Journal* of recent date has an article from Buckminster Brown from which we extract the following: "In this volume Dr. Sayre gives his treatment of spondylitis ending caries of the spine and spinal curvature by plaster paris bandage, and minutest details of its application, the process being fully illustrated by numerous photographs and engravings. We are correct in speaking of the treatment as his—for the idea of adopting this plan and applying it in all cases of spinal disease and curvature orginated with or was first brought before the profession by Sayre. On page fourteen due credit is given to Dr. Bryan of Lexington, Kentucky, for having applied a plaster paris splint to a case of Pott's disease, in 1874. But as an account of this application, although witnessed by several physicians, was not published or otherwise made known to our author, previous to May 1876, he derived no hint from that source.

Dr. Sayre's surgical skill and his scientific application of a fertile inventive genius commands our respect. His enthusiasm in the branch of surgery to which he has chiefly devoted his time, talent and energies, is well evinced by the ardor with which he has advocated, and consequently extended, his treatment of Potts' disease.

In the treatment of lateral curvature, we must differ in toto

from the author, the pathology of the two affections being different."

Such then is the manner in which this new method of treatment of spinal diseases is received. The criticism, although adverse in reference to his style of writing, as he uses the terms "jury mast," "dinner pad," etc., is favorable to the subject matter of the work and highly pleasing to its author. I have recently applied a plaster jacket to the chest of a young lady. The curvature took place in the second, third and fourth dorsal vertebræ. It gave decided relief and comfort. Being still under treatment, we can not speak more fully at present, but shall watch its progress and report at the earliest opportunity.

There are many other deformities the consideration of which might be interesting and instructive, but time does not permit a more lengthy discussion than we have already indulged in.

This review has been necessarily quite brief and imperfect; in fact the study of any one deformity, or era in the history of orthopedy would amply repay the investigator, and be equally beneficial. I am the more convinced every day that advancement and progress is only to be attained by patient industry and close application to some special department of medicine and surgery, and to this is due the present state of perfectness of orthopedic surgery, and when we consider the long list of names enumerated in this short paper, which are only a decimal of the number once and *now* engaged in this science, it is not at all wonderful, and we can only say "could it have been otherwise?" But all is not known or attained that can and must be, and upon us, the younger members of this time-honored profession, must the duty devolve of penetrating yet further the hidden mysteries of the human frame, and developing more fully orthopedic surgery and scientific knowledge.

ARTICLE XII.

A CASE OF URINARY SUPPRESSION IN YELLOW FEVER, TREATED BY INHALATIONS OF SUPER-OXYGENATED AIR AND JABORANDI. By W. HUTSON FORD, M. D., of St. Louis.

As I have ventured to suggest a trial of super-oxygenated air in yellow fever, in the last number of this JOURNAL, it became me at once to do what I had recommended. I have, accordingly, lost no time in so doing, and I hereto append the results of my experience, limited necessarily to one case, from lack of time and *opportunity*, though I hope to give the matter a further trial very soon. Having expressed to the Health Commissioner of St. Louis, Mr. C. W. Francis, my desire to try the use of oxygenated air in yellow fever as soon as possible, he very kindly authorized me to have the necessary appliances prepared, and gave me full authority to institute the treatment at the quarantine station, fifteen miles below this city, as all the cases developed here, in persons coming from abroad, as well as those found on vessels coming up the river, are placed there for treatment. Taking advantage of Mr. Francis' enlightened courtesy, I at once had the apparatus constructed, the oxygen prepared, and on the 29th of August made a trial of it as detailed in the accompanying notes.

The apparatus employed consisted of a gasometer holding twelve cubic feet, with an attached scale graduated into cubic feet and fifths of a cubic foot. I preferred to use a gasometer intead of a rubber bag, because, while costing scarcely more, its use dispenses with a bellows of known capacity for inflating the rubber sac, and because it is altogether more exact, takes up less space, is perfectly noiseless in action, and may be so adjusted by the weights as to rarefy or condense its contained air, within certain limits, or to hang upon an exact counterpoise, if preferred, this latter being the condition in which I used it. The patient breathes through a pipe leading into the interior, which constantly enlarges from the mouth piece to its inner extremity, which was one and one-half inches. The inhaler was such as is used by dentists for giving nitrous-oxide, and is so constructed

that the air is drawn from the gasometer, but is prevented from passing back again through the same pipe by valvular contrivances. The respiring tube was nearly three-quarters of an inch in diameter; it *ought* to be fully one inch in the clear, inside, but I could not procure such a one without delay. The oxygen was prepared by Siegel & Bobb, and purified by passing through caustic potassa. I had the ordinary mouth-piece reamed out to as large a size as possible, and this was simply inserted into the mouth of the patient, a trumpet-like cone of metal pressing over the lips and angles of the mouth. A little strip of rubber-plaster compressed the nares, which might also be done by a spring clip, so that the patient might sleep while he inhales, which indeed my patient, as reported below, often did.

The plaster or clip is taken off when the inhalation has been conducted long enough, and reapplied when he is to inhale again. The mechanical appliances were perfect, and no necessity was found for the use of any kind of cup designed to include both nose and mouth in one common receptacle; in fact none such that I examined, or could find, would answer, although such a one is in use in connection with the apparatus now employed for the inhalation of compressed or rarefied air by specialists for throat diseases. The gasometer and appliances were executed for me by Messrs. Higgins & Kelleher, in this city.

Aug. 29th, 1878.—Mr. A. W., born in Lexington, Ky., æt. 45; has lived in Memphis 35 years; has been acting as a volunteer nurse to the sick there. Left Memphis by the John B. Maud, on Sunday, 25th inst. On the evening of the 24th inst., had chilly sensations and great pains in the back; took a salt and water emetic, which caused active vomiting and much sweating, and went to bed. The following morning he took twelve grains of calomel which operated very freely. The first day on the river, feeling very hot, he had gone to the guard of the boat and sat in the wind for fifteen minutes; he had high fever at this time, viz., on the 26th inst. He thinks this imprudence chilled him, and he felt much worse afterwards. Came up as a cabin passenger. On the 27th he was stopped at Quarantine. The fever continued high and the bowels were frequently moved every day, by copious stools. On the night of the 28th he felt much weaker, and the pains in the back and head became so intolerable that next morning, (29th) about 10 A. M., a hypoder-

mic injection of *morphine* was given him, after which he became less restless, his backache disappearing, but not the headache.

It was at this stage, viz., on the fifth day of his disease, that I first saw him, at 7.40 P. M. He is now very restless; great irritability of stomach; well-marked hiccough; vomits occasionally without bringing up anything; eyes very much suffused and injected, and conjunctivæ quite yellow; skin perfectly dry and dusky; respirations shallow, 20; pulse 68; temperature 101¼° F. He has not passed any urine for some hours. (Suppression.)

8 P. M.—Took thirty drops of Squibb's fluid extract jaborandi.

9 P. M.—Took thirty drops more of jaborandi.

9:30 P. M.—Began to inhale oxygenated air, in the proportion of 30 per cent. of oxygen, including the oxygen naturally contained in air; begins to sweat.

10 P. M.—He is sweating profusely; after thirty minutes inhalation of the oxygenated air, he stops taking it; *pulse, 80°*; temperature, 100¾°; says he feels much less restless and anxious; has respired six cubic feet of the mixture.

10:40 P. M.—Vomits; moans; has not passed any urine.

10:50 P. M.—Respires two cubic feet of mixture.

11:30 P. M.—Jaborandi, gtt. XXX.

12 M.—Has been asleep; is much more comfortable; heaves a deep breath occasionally; there is much thirst and considerable irritability of stomach; he now vomits with very great straining.

AUGUST 30TH, 12:10 A. M.—Breathes oxygen for ten minutes.

12:30 A. M.—Sweating profusely; says the saliva accumulates in his mouth faster than he can spit it out; this is the sialagogue effect of the jaborandi; wished to sleep.

1:5 A. M.—He is asleep, but moans occasionally; soon afterwards sleeps profoundly and snores; wakes up and spits from time to time.

2 A. M.—He sleeps quietly and profoundly for fifty-five minutes; his shirt is soaked with perspiration; *temperature, 99.5°*; pulse, 76; respires a 50 per cent. mixture for fifteen minutes. The ptyalism of the jaborandi is declining; after five minutes inhalation, says he feels more comfortable, less oppressed; drops off to sleep.

2:40 A. M—Wakes and moans; inhalation for ten minutes; soon after gets up and has a small fetid action; has not passed a drop of urine since twelve o'clock on the 29th.

3 A. M.—Asleep twenty minutes later; inhales the 50 per cent. mixture for ten minutes.

3:40 A. M.—Note—The effect of the jaborandi has lasted for about four hours, and is now passing off; he takes thirty drops more; this makes four doses, altogether one hundred and twenty drops that have been taken; just before taking this dose, he had a heavy fit of vomiting without ejecting anything but glairy matters.

4:10 A. M.—Respires for ten minutes.

4:30 A. M.—Respires the mixture continuously for one hour and *sleeps quietly and deeply for an hour afterwards.*

At 8 A. M. and 9 A. M. respires for fifteen minutes, from a 60 per cent. mixture; takes a full dose of castor oil at 9 A. M.

10 A. M.—Inhaled for fifteen minutes; ordered two grains of calomel to be dropped on his tongue every two hours.

The patient says he feels better to day than he did yesterday afternoon. The tongue is moist, but he has not passed a drop of urine. Since daylight, he has not moaned, nor vomited at all; says he has no sickness at the stomach; no pain or tenderness at the epigastrium; *no headache*; every hour he inhales the 60 per cent mixture for fifteen minutes, falling off into a quiet nap after each inhalation.

12:30 A. M.—Has been to stool and passed some mucoid matters with much straining—while at stool *he passed, into a separate receptacle, some dozen drops of highly colored urine, loaded with bile and albumen.*

On being questioned, he says he does not feel as restless to-day as he did yesterday; drinks a good deal of water in quantities of an ounce or two at a time without nausea; he has not vomited since 3:40 this morning; says his eyes do not feel so full and heavy as they did yesterday; has no headache. He holds the inhaler himself; inhales every half hour or so for five minutes at a time and drops off to sleep; he is perfectly rational and composed; the conjunctivæ are very yellow.

2:20 P. M.—Gagged a little, but drank water just afterwards without vomiting it.

3 P. M.—Having been up with him all night, I was relieved for a couple of hours, leaving him in charge of an assistant. He continued the inhalations until 5 P. M., but as he had not passed his water, it was thought advisable by the physician in charge of Quarantine, (a gentleman of no experience in yellow fever),

to pass a catheter. No urine flowing, the patient became greatly alarmed, and refused to take the oxygen any longer. Passing the catheter under such circumstances is quite unadvisable, as the mere fact of anuria is significant enough of the suppresion, and the procedure always excites, irritates and uselessly alarms an intelligent patient when no urine is found. Being quite satisfied that the introduction of the catheter would have been both fruitless and unadvisable, I had carefully refrained from passing it, and it was done without consulting me, though I was within reach near by, and entirely in opposition to my intentions. As, however, he now refused to respire the oxygen any longer, and as I had no right coerce him, and as the physician in charge, moreover *informed* me that he was not at liberty to do so, it was impossible to continue the treatment further, excepting to order a hot hip-bath, and a diuretic mixture of acet. potass., sp. æth. nitros., and tinct. scillæ every hour and the cautious use of jaborandi. The inhalations during the last two hours, viz.: up to 5 P. M., were from a mixture containing 80 per cent. of oxygen; during this period he took a cubic foot of the mixture at a time, in the space of five minutes, inhaling as strongly and as deeply, without any extra effort, as I had previously found I could do myself upon the same apparatus. My treatment having been interrupted, I left him at 7:30 P. M., although I should thenceforth have given the oxygen *pro re nata*, as the man was greatly better. His condition, excepting as regards considerable anxiety for himself, was in all respects good. There was no drowsiness whatever; his intelligence was perfect; his temperature was 98.4°; pulse, 70; said he had no headache at all; had no nausea whatever, and while I asked him these final questions, drank half a goblet of ice water which I brought him myself, and retained it without any sensation of fullness or nausea.

REMARKS—I began with doses of air containing 30 per cent. of oxygen, and finally used doses containing as much as 80 per cent., of course always counting in the oxygen naturally contained in the air. In future I shall certainly reverse this, beginning with the stronger doses and probably weakening them as the treatment progresses. In virtue of the universal passive congestion, the lungs being very full of blood, the quantity of air taken in at each respiration is notably less than the amount which

is normally respirable by the same individual as simple "*tidal air.*" Indeed, by watching the gasometer, I could plainly see that the patient's inspirations were not one third as deep, on an average when he first inhaled, as they were towards the close of the treatment. As it is designed to supply the oxygen promptly, it would therefore be advisable to use strong mixtures at first, or even undiluted oxygen, and thus to bring the patient more quickly under its influence.

As far as I can judge from this case, the inhalations ought to be practiced every hour, and should last from five to ten or fifteen minutes. At first, the patient should respire the strong mixture, say of 80 per cent., or pure oxygen, for at least half an hour at a time, with half-hour intervals.

The disappearance of the headache, the declension of the temperature, elevation of the rate of heart-beat, the disappearance of the nausea and vomiting, the clearing of the intellectual faculties, were effects directly traceable, in my opinion, to the equalization of the circulation, which it was the object of the oxygen to induce. That it did all this I cannot doubt, and I believe that the good effects of the treatment would have been much prompter, had stronger doses of oxygen been given in the beginning. The sweating and sedation of the jaborandi, no doubt likewise caused the declension of temperature in part.

The patient was seen only late on the evening of the fifth day. His skin was dusky, and there was universal external and internal passive congestion. Of such a congestion of the kidneys, the albuminuria and the suppression were direct proofs. This suppression, as well as the general congestion, were notably precipitated or exalted, in my opinion, by the unfortunate dose of morphine injected under the skin, in an effort to calm the restlessness, moaning, and nausea, which are only symptoms indicative of the prostration consequent at once upon the non-arterialization of the blood, and its sluggish circulation through the nerve centres and viscera. Not only did the morphine in this case apparently precipitate the suppression of urine, but it so benumbed the nervous system as to render the equalization of the circulation far more difficult to effect than it might otherwise have been.

The jaborandi was given to induce copious sweating, which it did very rapidly and most effectively. My object in using the drug, was to avert danger by uræmic poisoning, by with-

drawing the toxic elements of the suppressed renal excretion as well as the bile, by way of the skin. I have found jaborandi capable of averting uræmic intoxication in those forms of latent nephritis which supervene insidiously upon chronic cystitis, and usually destroy the patient. The biliary salts contained in the blood have very probably much to do with that progressive destruction of blood-corpuscles, in yellow fever, in virtue of which an irremediable congestion and asphyxia of the tissues and viscera sets in as soon as the yellow hue is distinctly observable in the conjunctiva, which is always in this disease, coincident with cutaneous duskiness, increase of nausea, black vomit, and suppression of urine. (See an article on the action of the biliary salts on the blood-corpuscles, in the September number of the Lancet, 1876.) The jaborandi produced, in this case, considerable depression, marked by sensitiveness to cold, and some shivery sensations. The inhalation of oxygen *rectified these disturbances* almost within a few inspirations, by acting as a powerful diffusible stimulant. The patient took no alcohol in any form, nor anything whatever except what has been noted.

I shall use the method in another case as soon as I shall have an opportunity of doing so without danger of interruption, and shall report my result in this journal. The patient lived until the evening of the 2nd of September, seventy-two hours after I left him; no more oxygen was administered to him, and the case was one, when I first saw it, of necessarily fatal prognosis. Jaborandi has never before been used in yellow fever, to my knowledge; I have found its action prompt, and I think it will prove highly serviceable in conjunction with other remedies, in the earlier stages of the malady, and with oxygenated air when the congestion is marked, though its depressing influence late in the disease is to be guarded against. Unfortunately, for this purpose, alcoholic stimulants cannot be employed at this stage, and we must have recourse to other kinds of stimulation. Nothing seems to me to promise so well as the continued inhalation of oxygenated air until the secretions are re-established, and the disposition to general and local congestion has passed away.

No one can possibly appreciate the *essential toxic element* in yellow fever, which it is assumed by many must be necessarily fatal, more thoroughly than I do myself; but I am bound to affirm that *no amount of human foresight, sagacity, or practicable*

expenditure of money will ever prevent the outbreak and propaga-of this frightful disease under certain conditions, and the *only hope* left for our race, is by experimental science and pathological study, to learn how to *cure* the disease.

1611 Washington Ave, Sep. 4, 1878.

Article XIII.

Gunpowder Disfigurements. By B. A. Watson, M. D., Surgeon to Jersey City Charity and St. Francis' Hospitals, Jersey City, N. J.

Indelible marks arising from the presence of gunpowder in the integument, or from the stains made by it, are more frequently seen in civil than in military practice. These accidents arise from the explosion of the powder in comparatively close proximity to the parts on which the markings are found, and most frequently happen on our country's natal day as a part of the juvenile celebration. The face and hands, owing to the fact that they are generally unprotected by coverings, are the most common sites of these injuries; and it therefore follows that the removal of anything which disfigures these parts of the body becomes highly important,—especially in certain cases where beauty ranks equally with wealth or brain. Nevertheless a careful examination of our medical literature will satisfy any person, who will take the pains to make the investigation, that the subject has received little attention. This apparent neglect cannot possibly arise from the infrequency of these accidents, as they certainly are of frequent occurrence in our large cities.

No longer ago than the fourth day of last July three cases of this kind fell into my hands for treatment, and in each case a failure on the part of the patient to receive proper surgical aid would have resulted in a severe disfigurement for life. It therefore seems to me that I am justified in presenting the following questions for consideration: 1st, Does the disfigurement arise from the presence of grains of powder in the integument, or from the stains left on the surrounding tissues? 2nd, What are

the methods available for the relief of these defacements and their value and extent of usefulness. The answer to the first question requires that the character of the injury should be briefly examined. The grains of powder are not uniformly imbedded in the integument at the same depth; some only slightly enter—scarcely penetrating the entire thickness of the epidermis, and many others penetrate through the derma, while occasionally some go even deeper; but as those granules which go deeper than the integument do not cause the disfigurement here referred to, it will be unnecessary to consider their action.

The fact that if a grain of powder remains in the integument it will cause the disfigurement need only be mentioned here; but I am not equally certain it is generally known that a greater disfigurement arises from the granules being decomposed and partially discharged or absorbed while the carbonaceous or coloring matter remains in the skin.

In a few cases the prompt removal of these granules fails to relieve the disfigurement because the surrounding tissues are already stained. It is, however, true that the process of staining does not regularly occur in connection with every granule of powder; in a large majority of instances it will be observed that the stains are comparatively few, and generally associated with those grains which penetrate the derma deeply.

This process of staining, in most cases, takes place with great rapidity, but it gradually extends during the first few hours after the receipt of the injury. The explanation of the fact that in many instances there are deeply imbedded granules without staining of the surrounding parts may be, I think, principally due to the absence in those cases, of the required amount of fluid in immediate contact with the powder in the skin. The indelible stains produced in these cases by the powder, are of a bluish or blue color, and may arise from the presence in the integument of the granules, or from stains remaining behind after their removal. We now come to the consideration of the second question, or the treatment. On this subject, Prof. Hamilton says: "Its removal is best accomplished as soon as possible after the injury is received, and before the swelling has closed the orifices of entrance, by the use of a pretty well sharpened probe or pick made of wood, by a goose quill, or by an instrument of silver or of steel. In order to find the small orifices, the surface ought to be thoroughly washed with warm water and then carefully dried, and the part

should be brought into a strong light, or a convex eye-glass may be used. If more time has elapsed, and the orifices are completely closed, each separate grain must be cut upon by the point of a lancet, or by a sharp bistoury. The operation is tedious and sometimes painful, but it will generally well repay for both the labor and the pain. It must not be understood, however, that the removal of the powder, even though it is accomplished very promptly, prevents entirely the discoloration. It diminishes the discoloration very greatly, but we have never seen it altogether prevented.[1] "Prof. S. D. Gross says: "When *powder* is imbedded in the skin, every particle should immediately be picked out with a cataract needle, or delicate bistoury, entirely regardless of pain. If this be neglected the powder will speedily excite inflammation, besides causing disagreeable and permanent disfigurement by the bluish spot which it leaves. The operation is not only tedious, but always attended with severe suffering."[2] The above quotations contain nearly all that I have been able to find in print relating to the treatment of these accidents, excepting that which pertains to combatting the inflammation. Both authors agree that the grains of powder should be removed immediately, that the picking out is a tedious process and that a sharp-pointed instrument is needed for the operation. I am ready to admit that the sooner the powder is removed, and the more perfectly the work is done the less will be the disfigurement; but it frequently happens that, owing to the tediousness of the operation, or a defective light, or the exhaustion of the patient from the severe pain, that the surgeon is compelled to abandon further proceedings for the day. This delay has happened to me and I have learned a lesson through it. I am fully convinced that the removal of the grains of powder is more rapidly accomplished after the lapse of 18 to 24 hours after the receipt of the injury than at any earlier period.

Another condition which occasionally exists I have attempted to relieve by the use of an instrument which I have called a discotome and described in the *Medical Record*, (N. Y.) July 27th, 1878. The instrument is intended to render possible the removal of powder, or powder discolorations, which are often found widely scattered over the face even months after the accident, and

1. Treatise on Military Surgery, 1865, p. 195, *et seq.*

2. System of Surgery, 1866, Vol. I, p. 378.

further to accomplish the work without leaving behind any other defacement. Its use in my hands has been very satisfactory. It enables us now to entirely prevent disfigurements, which previously were allowed to remain. Having carefully picked out all the grains of powder, it will always be found, on close examination, that in a few places there remains behind discolored tissue. I prefer now to leave the case without further operative interference about one month. At the expiration of this period let the patient return and I then remove with the discotome the remaining discoloration. "The following advantages are gained by the use of this instrument: 1st. The removal of scattered granules. 2d. This removal is effected with the least possible loss of tissue. 3d. The operation is easily, neatly and quickly performed. 4th. No dressing is required, save possibly an occasional application of cold water."[3]

Proceedings of Medical Societies.

HOWARD COUNTY MEDICAL SOCIETY.

The Howard County Medical Society met in Glasgow, Mo., pursuant to adjournment, August 5th, 1878.

The meeting was called to order by Dr. I. P. Vaughan, President of the Association.

The minutes of the previous meeting were read and adopted, and upon the roll being called the following gentlemen answered to their names: I. P. Vaughan, J. W. Hawkins, B. E. Powell, J. T. Bailey, M. B. Collins, J. B. Scott and U. S. Wright.

Dr. Scott was called upon to read his essay, but the Doctor offered an acceptable excuse for his neglecting to be prepared and, by promising to be ready with an essay at our next regular meeting, he was released from duty without censure.

Dr. Dawson was absent, so we were debarred hearing from him.

Dr. Wright, as per appointment, opened the discussion on the best mode of treatment for the radical cure of hemorrhoids. He rehearsed to the Society the principal methods now known, viz.: incision, excision, ligature, nitric, galvanic cautery, etc., including

3. The Medical Record, Vol. 14, p. 78.

the most recent method by hypodermic injection of a variety of fluids into the tumors. The Doctor rather preferred the ligature, as the most certain, quickest, and, perhaps, the safest method in use, though he spoke favorably of the use of carbolic acid, and olive oil, used hyperdermically, (a remedy made known to the profession within the past few years,) and read several journals, in which statements were made that this carbolized oil had been trafficed in extensively by physicians in the past few months as a cure for piles—some paying as high as twelve hundred dollars for the right to practice it. Dr. Wright thought the hypodermic method a good one, but feared it would prove a more tedious cure than the ligature.

Dr. Collins prefaced his remarks by saying that he agreed almost entirely with Dr. Wright, stating that as far as his experience went in the treatment of hemorrhoids, he thought the ligature a safe and reliable method of cure, and remarked that he had used it successfully in many cases. The Doctor preferred the use of only a few drops of carbolic acid, (undiluted with the oil) used hypodermically, believing it a less painful method of treatment.

Dr. Bailey also made remarks with reference to the subject under discussion. He, too, thought the ligature a method that should by no means be laid aside, though he thought the use of the syringe with carbolic acid and acetate of morphine the most painless treatment. He also gave us his secret remedy, "mullein tea," for the reduction of inflammatory action in these tumors.

Dr. Hawkins thought the ligature the best method known to himself for the radical cure, though he spoke highly of the use of fluid extract of rhatany, in his hands, for the alleviation of this malady. The Doctor simply used it as an injection, in connection with the use of cream of tartar and sulphur internally.

Dr. Powell knew no method better than the ligature, though he thought ergot or carbolic acid might be used hypodermically with success.

Dr. Scott spoke favorably of the new method by hypodermic syringe, etc., and thought ergotine might be ascertained to be a good remedy thus used. He relied upon the acid and oil as a safe and good treatment, and related a case he had treated recently, assisted by Dr. Wright, in which ergotine was used with one or two tumors, and the acid in the remaining tumors. He states the case is now almost well, and has only been treated four times, and has not been required to quit his occupation as a laborer.

Dr. Vaughan spoke at some length, entertaining the Society very much with the relation of his experience in surgery. He spoke of the certainty of the cure of this malady by division of the sphincter muscle, relating, perhaps, a score of cases upon whom he had operated in this way for the cure of fistula caused by piles, and invariably the hemorrhoids were cured. He thought

the ligature a safe procedure, but a painful one, and he related cases he had treated by the use of the syringe and carbolic acid, also with the use of salicylic acid, and thought the hypodermic method promises to be the best method of treatment for radical cure.

All the gentlemen entered heartily into the exercises of the meeting, and all seemed to be glad to meet each other in the hall of science. As there had been no action taken in the Society as to how local physicians now practicing a secret remedy in our communities should be regarded by the profession, on motion of Dr. Collins the following resolutions were adopted by the Society:

WHEREAS, Certain members of this Society, to-wit: Drs. T.W. Radford and John A. McKinney, did, at a meeting held at Fayette on June 3rd, 1878, offer their resignation of membership, and

WHEREAS, It has come to the knowledge of the Society that their resignations were offered for the purpose of practicing some secret remedy; therefore,

Resolved, That we consider the conduct of these physicians entirely unprofessional, and that we hold them unworthy of membership in the Society, and of professional courtesy.

Selections.

BATTEY'S OPERATION—EXTIRPATION OF THE FUNCTIONALLY ACTIVE OVARIES. By J. M. RICHMOND, A. M., M. D., of St. Joseph, Mo.

In the course of our professional lives we are sometimes called to pass through an experience which generates within us a feeling very akin to remorse, because of the loss of a sweet and valued life which has slipped from our hands into the arms of death, when all was not done which might have been done to rescue it. The writer has recently passed through such an experience, the feeling in this instance though but remotely akin to remorse, because the necessity was urged and friends refused.

The custom in our Associations is to report operations done; I wish to presume so far upon your kindness as to vary from this rule and report one which was not performed.

I believe that Spencer Wells is now in his eighth or ninth hundred series of ovariotomies. From which we may judge of the number of precious lives which were lost from the time that McDowell gave the operation to the profession, until its adoption as a legitimate procedure, because they would not accept it. I wish to enter a plea in favor of "Extirpation of the Functionally Active Ovaries," as a remedy in otherwise incurable diseases, on which for lack of a better name, Dr. Sims has called "Batteyism." You may think that we are treading upon ticklish ground when we remember the fate of poor Baker Brown. But its author asserts that it is not applicable in nymphomania, and that the loss of the ovaries does not annul the aphrodisiac propensity. The object of the operation is the arrest of ovulation, and as a consequence the various diseases or functional derangements dependent upon it: in other words to avail ourselves, in a curative way, of the alterative changes in the female economy attendant upon the "change of life." Dr. Battey, the originator of and the first to put practically to the test this idea, says it is indicated "in the case of any grave disease which is either dangerous to life or destructive of health and happiness, which is incurable by other and less radical means, and which we may reasonably expect to remove by the arrest of ovulation or change of life." It is indicated in various diseases and conditions. The organs may be healthy or not. It is only proposed in otherwise incurable diseases. We do not hesitate now, as we used to, to remove a cystic ovary; why should we when there is no cyst or other disease, though the indications are as positive. It is true that my case was an unusual one, but to my mind it was so urgent, and believing that other physicians may have suitable cases I thought I would bring the subject before the Association, especially as the procedure is "sub-judice," and many lives may be lost in the meantime, as I believe was the case with my patient.

Probably most of you are already acquainted with a portion of the history of this case, as it was published in the St. Louis Medical and Surgical Journal, vol. xiv, p. 169: "Complete Occlusion of the Vagina. Result of traumatic injury; Relieved."

The operation for restoration of vaginal outlet was performed July 31, 1871.

May 15, 1878.—About one year ago, I was called to see Mrs. V., and found her suffering with a pelvic abscess, from which she soon got relief by its discharging through the bladder. As anticipated I found it urgent to give relief in some way; but, to my disappointment, there was a *complete obliteration* of the artificial vagina, which had afforded relief for nearly six years. The parts were about in the same condition as when I first saw her. Examination, per rectum, found the pelvic contents one firm mass, glued together from inflammation. It was impossible to perform any

operation looking to the restoration of a communication with the womb. She menstruated a few times through the bladder, which ceased, and she would have an abscess at nearly every molimen. I felt that each abscess diminished the chance of an external discharge, and that her condition was a critical one, though she was in pretty good health; and I could not impress her seriously as to her danger. Dreading every return of the monthly molimen, and being able to do nothing else for her, she only twenty-eight years of age, I advised her to submit to ovariotomy, believing that it would stop menstruation and she would be freed from her danger. But she and her family would not consent.

About the 23rd of April past, I saw her, then suffering from another abscess, which, in a day or two, was discharged—blood and matter, as usual,—through the bladder and gave relief. But this was only temporary, for I had to see her again soon, suffering very intensely with an abscess. On the morning of May 1st, she expressed herself as having gotten sudden relief from the pelvic pain, but this time there was not the usual discharge. On examination found the abdomen becoming rapidly tympanitic, and very tender; pulse rising in a little while to one hundred and fifty and growing weaker. The abscess had discharged into the peritoneal cavity. She died that evening.

When I first suggested and urged ovariotomy and it was refused, I wrote to Dr. Sims. He advised me to correspond with Dr. Battey. I did so, and give herewith an extract from his letter: "The 1st of February, I had a case very similar to yours, but the result of extensive sloughing following difficult labor. Two unsuccessful efforts had been made to re-establish the vagina. The suffering was such as to induce me to remove the ovaries by the abdominal route. The patient made a prompt and perfect recovery, and is now enjoying excellent health. This is, undoubtedly, I think, the remedy in your case."

I believe now, as I did a year ago, that ovariotomy, and that alone, offered her any hope, and, done in time, would have saved her life. You notice, from her history, that the functions of the ovaries and womb, they being hermetically sealed, remained dormant until after she was married, at the age of twenty-one, and she never had the slightest trouble until then. I lost sight of this patient for nearly three years, during which time she menstruated normally and regularly. And the good results of the operation would have lasted longer, *probably*, but she failed to carry out my instructions as to the use of the glass plug.

For statistics, etc., in Dr. Battey's operation I refer you to the Gynæcological Transactions for 1876, up to which time he had performed ten operations, and his experience since is still more encouraging, the arrest of menstruation being the rule.—*Missouri State Medical Association Transactions.*

Animal Vaccination, With Especial Reference to its Failuer on the Human Being, and Causes Thereof. By R. M. Higgins, M. D., of Manchester, Mo.

It is not the purpose of this paper to discuss the satisfactory results of animal virus, but rather its failures, and the causes thereof, when used upon the human being, and so far as lies in my power, enable the physician to guard against such recurrences.

Failure of cow-pox virus to produce vaccination upon the human being may be due to one of three causes.

1st. To virus being used which has been propagated in an improper manner.

2nd. Virus may be improperly kept or used by the physician.

3d. It may fail because of peculiarity of constitution, or want of susceptibility of the individual to the disease.

1st Cause: As the production of the virus on the animal is of no practical importance to the physician, I do not deem it proper to consume the time of the Association in giving the various details connected with the process of securing it. The selection of a suitable animal, the main points of which are good health and well nourished skin, caring properly for the same, collecting virus at the proper stage of developement of the disease, and carefully protecting it, are steps each requiring the especial attention and close observation of the propagator. I am well aware, having used virus from the different propagators through the United States, and that of my own production, too, upon the human being with negative results, that material, represented and doubtless supposed by the propagator at the time of issuing, to be genuine vaccine virus, has been issued to physicians when it was not good.

The issuing of such virus, together with the pre-existing idea in the minds of some of the profession, derived from the various text books of this country and Europe, that, virus taken direct from the animal could not be used as successfully upon the human being as the humanized virus, has proportionately retarded its more general use by the profession; yet the most skeptical should not fail to take into consideration the possibility of failure being due to some error of the propagator, in not properly observing the necessary precautions to procure a good virus.

My own efforts in producing cow-pox virus have not been attended with complete success. Some animals have failed to yield satisfactory results; especially was this the case during the first year or so of my experiments. These failures, though discouraging at the time, I have always found due to some neglect

on my part, and hence they have proven instructive lessons for the future, and confirm me in my opinion that *no* source for obtaining a reliable and perfect vaccine virus is at all comparable to that of the bovine species.

2nd. Virus direct from the animal may fail to produce the desired result, because of being kept or used improperly by the physician. The use of cow-pox virus is an innovation on the old system of vaccinating, and we might reasonably expect to hear of failures from those unaccustomed to its application. Though these cases of reported failure have been comparatively few, nevertheless they have been exceedingly harrassing and annoying to me, as a propagator, and from whatever source reported I have assiduously endeavored to ascertain the causes, among which I am enabled to enumerate the following as the most rational: Carrying the virus in an inside or vest pocket, either being a convenient receptacle, or the busy practitioner neglects to use it for two or three days, or a week, when the virus is rendered inert from the heat of the body; using the inside or concave surface of the quill, thinking the virus was deposited there, instead of the convex or proper surface, and in not using care enough in rubbing it into the abrasion on the arm; using virus that had been kept too long, either by the physician or druggist.*

3d. As a third reason for failure I have to offer the peculiarity of constitution or want of susceptibility in vaccine to the disease. These cases among the unvaccinated are of such rare occurrence that we seldom have to consider them as a cause of failure; yet the existence of an occasional case of this kind is rational, and entirely in accordance with the nature of the action of the disease, as shown by the susceptibility to and more marked intensity of the disease in some unvaccinated persons than in others.

As a *sine qua non* to success, the process for obtaining the virus must be such as will result in the production of a good virus, and the rule is, the more recent it is from the animal the more apt is success to follow its use. In using the virus physicians should carefully follow the directions. Vaccination, unless absolutely necessary, should not be performed in hot weather, because, 1st, of the difficulty of obtaining a reliable virus, heat so readily decomposing it, and 2nd, of the danger to the patient of inducing intestinal or other complications.

Physicians should see the patient on the eighth or ninth day after vaccinating, to ascertain if the virus is active, the vesicle developing properly and the case progressing favorably.—*Missouri State Medical Association Transactions.*

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* As evidence of the validity of these reasons it is a fact that virus from the same cow sent to different physicians on the same date will yield opposite results.

Extra Uterine Fœtation—Death of Fœtus in Eighth Month. Removed after two Years.

By R. E. Howlett, M. D., of Otterville, Mo.

Mrs. Rhea, aged 36; married; one child, aged eight and a half years; never aborted. Had menstruated at regular periods since the child was taken from the breast until April 25th, 1875. Came under my care June 14th, 1875, suffering excruciating pains in right iliac region accompanied by nausea. She also had chronic bronchitis and some dyspeptic troubles. These pains would be very severe every few minutes until finally relieved by anodynes. Patient seemed very anxious from my first visit that I should pronounce her pregnant; on this point she received very little encouragement, as my conclusions were that it was a case of ovarian inflammation, which would to some extent explain the suppression of her menses for the last two periods. All her symptoms had improved by the 20th except her bronchial troubles, so I had not seen her again until July 4th, when pain in the right iliac region recurred even with more severity than at any former time.

The suffering seemed as severe as is seen in an aggravated case of orchitis. Abdomen considerably swelled and somewhat tender on pressure—more so on the right side. She was still very anxious to be pronounced pregnant. I evaded her questions, as the case seemed to be one of ovarian trouble.

With anodynes to relieve pain and tonics to support the strength, she did tolerably well until July 25th, when same character of pains recurred; this time I had Dr. Woodfin, of Syracuse, to see her with me. Abdomen distended and somewhat tender; bronchitis increased and claiming as much attention as any other symptom in the case. At this time the pains were not so completely confined to the iliac region, but extended over the entire hypogastrium. She again urged the pregnancy question, and seemed vexed that Dr. Woodfin would give her no more satisfaction on the subject than I had. Sufferings again relieved with anodynes; a prescription made for the bronchitis, and tonics continued.

July 27th.—Patient doing well; treatment continued as per agreement.

August 19th.—Called to see her for my own satisfaction; her general health somewhat improved; bronchial trouble had disappeared; the distension of abdomen completely subsided. I now had no difficulty in discovering an elongated tumor of considerable size extending diagonally across the abdomen

reaching nearly to the median line, the base of which rested in the right iliac fossa; was firm and but slightly movable.

She again urged the pregnancy question. Told her the only thing that suggested such an idea in her case was the fact of her having failed to menstruate for the last four periods. My fears were that she had an ovarian tumor of rather rapid development.

September 28th.—Was summoned to see her husband, who had pernicious fever, of which he died the next day. During this visit she told me it no longer remained a doubt in her mind as to her being pregnant, having felt the movements of the child perceptibly several times during the last three days. The tumor had increased rather rapidly, extending along the median line, but most of the development being on the right of the median line. Could discover nothing about the tumor that would indicate its being a fœtus. General health better than at any time since her first attack.

Nothing occurred in her case to demand attention until Nov. 4th, when she was suffering pains which appeared to be a threatened premature labor. Vaginal examination made, found the womb in what I thought an unimpregnated condition with os and cervix pushed far to the right side. The patient seemed in size to be about the sixth month of gestation. Placing my hands on the abdomen there could be a movement felt every few minutes, and these movements seemed to be the cause of the patient's suffering. I now auscultated and could hear the fœtal heart very satisfactorily; there seemed to be only a thin membrane between my ear and the fœtus. This sound was conclusive evidence of the presence of a child, but the position and condition of things puzzled me, and having had success in her case with anodynes I determined to push them to the point of relief, and await indications. With one-fourth grain doses of morphia every three hours she was soon free from pain, but not sleeping; the fœtus was now very quiet.

November 5TH.—Had suffered some pains, but they promptly checked with one-fourth grain doses of morphia.

November 8TH.—Suffering severe pains; movements of fœtus quite vigorous, which, as before, seemed to be the cause of patient's suffering. Morphia increased to one-third grain doses, which relieved her in four hours. Auscultated and could hear the fœtal heart more distinctly than on first examination.

November 24TH.—Morphia increased to one-half grain, given for the relief of pain. These doses were gradually increased until Dec. 15th, when she was taking nine-tenths of a grain at a dose, repeated when pains were severe, which would be at intervals of one or two days.

Dec. 24th.—Suffering as before, only more intensely; vaginal examination revealed no change in condition or position of uterus; patient very much emaciated, having decreased in weight

from 96 lbs. to 74 lbs.; the abdominal wall seemed almost as thin as a sheet of brown paper, through which the limbs of the fœtus could be easily felt. The movement of the child had now become alarmingly vigorous, causing the mother intense suffering; morphia was given pretty regularly, more for the purpose of keeping the fœtus quiet than for anything else, the patient remaining nearly free from pain, unless the child moved.

January 4th, 1876.—Pains severe, beyond anything she had previously suffered, even beyond description. She would pull against the hands of the nurse, using every voluntary effort possible to expel the source of her suffering; during these efforts, I made several vaginal examinations; womb unchanged from former examinations and seemed to be taking as little part in the affair as if it had been in some other body, but the child was taking quite active part, indeed it appeared to be the principal actor. Placed both my hands on patient's abdomen, partly to control actions of fœtus; also for mother's protection. This suffering continued at intervals of from twenty minutes to half an hour, until 4 o'clock A. M., January 5th, when the child made some very quick motions, a slight jerk, and then was perfectly still; the mother sank back on the pillow in a half-fainting, almost pulseless condition; one oz. of brandy was given immediately.

Thinking the mother would not last many moments, I auscultated for the fœtal heart with the intention, if it could be heard, of removing the child as soon as the mother breathed her last. During this time my hand had been on the mother's pulse, which gradually revived, and in one hour she expressed herself as feeling well enough to sleep, which she did quietly for two hours. Left her at 8 A. M., January 5th, resting well, but rather weak. Returned at 4 P. M., Dr. Saunders with me, who, after an examination, decided it a false alarm, and gave as an opinion that she would be confined about the 20th or 25th of the month. Patient had not suffered a pain since the child ceased to move, nor did she suffer any more, but rapidly improved and in three weeks was going about the house without having had any vaginal discharge.

February 17th.—Menstrual period appeared, which caused considerable nervous derangement, but was relieved of suffering in a few hours. Again, had Dr. Woodfin sent for; met me the 18th; after a half hour's talk he examined the case but expressed himself as not at all satisfied with the examination. Continued the wine and cordial; distention of abdomen gradually subsiding, health improved rapidly; menstruated without trouble about the middle of March, and has been very regular ever since. On April of '76 had Dr. Saunders to see the patient again; after a prolonged examination decided the child was still in the cavity of womb; suggested the dilation of the os, after which the fœtus could be removed with forceps. This was not attempted.

Her health had now so far improved that she could ride horseback five or six miles without trouble or walk one or two miles with little inconvenience.

During the winter of '76 and '77 the patient's health was good and she seemed to experience little inconvenience. She was gradually decreasing in size; abdomen less distended and nearly every part of the fœtus could be felt. Could not gain her consent to be examined by a number of physicians that might be selected; she thought as her case was getting on so well, there was no necessity of an examination; but, during the hot weather of August, '77, her condition became so burdensome to her that she asked my advice about its removal. Gave my decision in favor of an operation.

She finally determined to be operated on, and the 15th of January, 1878, was selected as the time. I selected this time as the farthest from any menstrual period. The time for the operation being two years and ten days after death of fœtus. Present, were Drs. Scott, King, Conkwright and E. C. Evans, of Sedalia; W. Howard, of Boonville, and Hooper, of Cooper County. Twenty minutes before the anæsthetic was administered I gave her one oz. of brandy and twenty drops of tinct. of opium. Carbolized water was used for sponging; no spray. An incision was made extending from one half inch below the umbilicus to within one inch of the pubis; so soon as the peritoneal sack was opened the fœtus was in plain view with its back to the abdomen of the mother; breach and lower extremities to the left of median line; body and upper extremities to the right with the shoulders and head resting in right illiac fossa. The fœtus had some omental attachments which were easily released by the fingers; it was partly encased in a substance that seemed the remains of what at one time had been a placenta and membranes. Weight of fœtus one and three-fourth pounds. The fluids were sponged from the abdominal cavity. The wound was allowed to remain open for some time until all oozing ceased, after which it was closed with silver sutures, including the peritoneal sack; the sutures were placed one inch apart with adhesive straps between; no superficial sutures were used. A fold of cloth well saturated with carbolized water was placed the entire extent of the wound, over which several layers of cotton batting; then a broad flannel bandage was fastened light enough to secure the dressings; a dose of morphine given hypodermically and the patient removed from the table. At 1 o'clock P. M. we left the patient resting quietly, reaction partially established; 4 o'clock P. M., no suffering, reaction complete; 6 o'clock P. M., gave one-eighth grain morphine with two grains of quinine, to be repeated every four or six hours. January 16th, resting well, pulse eighty, appetite good; used catheter twice during the day; 17th, had rested well; was in good condition in every respect; catheter used; opened

the bandage but as everything seemed well, I replaced it without meddling with the wound: 18th, third day after the operation, replaced the cloth on the wound with lint moistened with carbolized oil; wound in splendid condition; used catheter again; 4th day, doing well in every respect; passed urine without catheter; some of the adhesive straps replaced with fresh ones; 5th day, bowels moved without any assistance; 6th day, removed all the adhesive straps, replacing them with fresh ones; wound healing by first intention; no swelling, not even redness along the wound; 7th day, doing very well; 8th day, removed two sutures; 9th day, removed one suture; kept the wound well covered with carbolized oil; 10th day, menstrual flow appeared without inconvenience; removed two sutures; 12th day, bowels moved after two doses mag. sulph.; 13th day, removed two more sutures; wound entirely healed by first intention, except about one-fourth inch, which seemed granulated; this was treated with burnt alum and soon healed; 16th day, patient sat up long enough to have her bed arranged and walked about the room every day from this time; in four weeks she was making calls in town and is now in better health than she has been for years; never having suffered a pain nor missed a meal by the operation.—*Missouri State Medical Association Transactions.*

Note.—Operation during life of fœtus was not considered advisable for the reason that the condition of the mother was that of such extreme exhaustion that it did not seem probable that she could survive the shock.

Clinical Reports from Private Practice.

Diabetes and Pruritus Vulvæ. By E. Montgomery, M. D., of St. Louis.

In the July number of the New York reprint of the *London Lancet*, I see a short article on the frequent concurrence of diabetes and pruritus vulvæ, by Dr. Wiltshire, Lecturer on Midwifery and the Diseases of Women and Children in St. Mary's Hospital, London.

Dr. W. says that he has observed the co-existence of these two affections so frequently and that with the exception of calling attention to it in his lectures he has never before adverted to it by publication or otherwise, and would, therefore, now request the profession to investigate the matter and report the result of their observation and experience. The Doctor

states that many cases of diabetes are first brought to the notice of the physician, by patients consulting him with regard to the pruritis vulvæ, and he seems to believe that there is some very intimate connection between the two affections.

Now whether there is a physiological and pathological relationship between these diseases, or whether the pruritus vulvæ accompanies the diabetes in the same manner as phthisis, diseased kidney or liver does, is a question as yet hard to decide. I think there is no doubt of the fact of the very frequent coincidence alluded to by Dr. Wiltshire. I have frequently remarked the coexistence of these two affections, but as far as my recollection serves me, the form of diabetes present was always characterized by an abundance of glucose in the urine, and an abnormal increase of the urinary secretion. I am at this time attending a lady with a grave case of diabetes mellitus, who suffered terribly with pruritis vulvæ until relieved by a lotion of diluted Condy's fluid, and an ointment containing salicylic acid.

The cases I have observed occurring in diabetes characterized by polyuria and glucose in the urine, I have thought it probable that the pruritus was excited by the peculiar chemical constitution of the urine, especially as this secretion was so copious and, so frequently voided, that it must necessarily come into contact with the parts.

Another theory as to the coincidence of diabetes and pruritus vulvæ may be suggested namely, nervous influence. It is highly probable, according to the investigation of Bernard, Dickenson, Scheff and others, that diabetes often arises from some irritation or abnormal condition of some part of the central nervous system, which being conveyed by the sympathetic nerves to the blood vessels of the liver, produces in them a hyperæmia and dilatation which excites the glycogenic functions of that organ, and thus causing diabetes mellitus. Now may not this nervous irritation then also give origin to the pruritis vulvæ, in the same manner as herpes is often believed to depend on some diseased or abnormal condition of some parts of the nervous system?

In conclusion I would remark that in the early stages of those cases of diabetes characterized by glycosuria and polyuria, I think I have observed most happy results from a few drops of the tincture of iodine in two ounces of water three times a day, and pills composed of strychnine, phosphorus and iron at bedtime.

ST. LOUIS, July 30th, 1878.

Operation of Trephining. By Jas. L. Perryman, A. M., M. D., of Belleville, Ill.

I was called to see Mr. William Williams, a coal miner by occupation, who had his skull fractured by the premature explosion of a blast in a coal mine; the point of fracture commencing a little above the left frontal eminence of the frontal bone extending to the opposite side and down to within half an inch of the nose. There was about a tablespoonful of the brains that had oozed through the wound. It was a compound comminuted fracture with depression of the bone and compression of the brain.

The patient being in convulsions I suggested to my friend Dr. Moore, who assisted me, to put him under the influence of chloroform. I then shaved the scalp, cleansed it and made a V shaped incision, so as to include the fractured and a portion of the sound bone, and then applied the trephine. After the crown of the instrument had passed through the external table and diploetic structure, I rotated the trephine a few times upon the vitreous or internal table of the skull, bending the instrument gently backward and forward, breaking out the piece that was inclosed in the crown of the instrument, thereby preventing any possibility of wounding the dura mater with the teeth of the saw.

I have practiced this mode of procedure in several other cases with good results, and I believe from the experience that I have had that it is by far the safest mode of operation. For it is extremely difficult, as every surgeon of experience knows, to trephine the human skull without wounding the tissues beneath. I am not unmindful of the fact that such a mode of procedure is unauthorized by those who have taught and written most about surgery.

With the elevator I raised the depressed bone and succeeded in removing several fragments of the osseous tissue.

The membranes of the brain were wounded, and as I before remarked, a tablespoontul of the brain had escaped through the wound. After the removal of the fragments of depressed bone the patient passed rapidly from under the influence of the anæsthetic. His convulsions ceased promptly; pulse full and strong, sixty-four to the minute; respiration less stertorous and much more natural, and in about an hour after the operation spoke coherently but in monosylables. We prescribed thirty grains of calomel to be taken as soon as the patient could be induced to swallow it. Ordered ice in a bladder applied to his head. Saw the patient next morning; the calomel had acted properly; pulse full, more natural, seventy per minute; respiration easy and reg-

ular, mind clear, consciousness completely returned. Ordered quinine three times a day. Second day saw the patient with all his symptoms improved, wound looking well. Continued to improve without any untoward symptoms until complete recovery had taken place.

Convalescence reaching over a period of twelve weeks. I send you a photograph of the patient after complete recovery. Two years have passed since the accident occurred.

About a year ago, I was called to see Mr.——, aged thirty, who is also a coal miner by occupation, whose skull was fractured by a piece of coal falling upon it, about an inch and a half or two inches above the left eye, about the junction of the squamous portion of the temporal bone with the frontal. Shaved the scalp; made the usual V shaped incision, including a portion of the uninjured bone and the fractured portion. This patient also was in convulsions; Drs. Moore and Stookey administered chloroform; I applied the trephine as detailed in the preceding case. Took the elevator and raised the depressed portion of the temporal bone.

The anæsthesia soon passed off leaving the patient quiet; convulsions ceased; pulse sixty; respiration free. Prescribed thirty grains of calomel, and ordered cold applications to the head. Next day found the patient perfectly conscious; respiration free and easy; pulse seventy-two per minute; took nourishment; prescribed for him three grains of quinine, every eight hours; continued the cold applications. These patients recovered completely with no loss of mentality and no paralysis.

I have been induced to prescribe quinine for all of my surgical patients, from the fact that we are living in a malarious district. I think it greatly lessens the danger of tetanus and erysipelatous inflammations.

Correspondence.

UNIVERSITY OF MICHIGAN,
ANN ARBOR, Aug. 24th, 1878.

EDITORS JOURNAL:—Your letter of the 19th inst. is at hand. I send you by the same mail a *statement* of our Faculty of the state of things as at first established, but at the recent meeting of the Board the change took place indicated in the special announcement to which you refer.

You will see by the marked passage in the "statement" on

page 4, that we *never signed* the diplomas of the Homeopaths. This, of course we never would have done—would have resigned en masse if we had been so required to do—but some of our Faculty did not only have them present at their lectures, but examined them on the subjects of their lectures and marked them as they did other students—and sent a report of their standing to the President of the *University*, which he sent to the Dean of the Homeopathic Faculty, and which was used by that Faculty in pronouncing upon the qualifications of their students for the Homeopathic Degree. That was all. But we asked to be relieved from this, or from any recognition of them in any way, and the Regents had become so disgusted with the Homeopaths that they unanimously granted the request, and now, although the Homœopathic students attend the lectures on Chemistry, Anatomy, and some few others in our school, yet these Professors pay no attention to them—do not recognize them—never examine them, and of course give no certificates to the President as they did before, to be used in making up the account for their graduation. The Homeopathic Faculty have now a Professor of Practice of Medicine; one of Surgery and one of Materia Medica, etc., and the Homeopathic students attend no lectures in our college on these subjects. They have never attended any of my lectures on Pathology and Practice of Medicine, so I have never had anything whatever to do with them. Those of our Faculty whose lectures these Homeopathic students attend, are in the same position in relation to them that the Clinical Professors in Bellevue, or the Chicago, or any other hospital are, where, by the authorities of the hospital, Homeopathic students take the hospital tickets and attend their teaching. By reading the statement I send, and with this explanation, you will fully understand our position. We shall be very much gratified if even a few members of the medical profession will do us simple justice, and give to the profession correct information on this subject.

I am particularly obliged to you for your proposal to state that none but Homeopaths sign the diplomas of the Homeopathic students. None of our faculty, and no regular medical man, signs any of their diplomas—none ever have. The President and Secretary of the Board of Regents, *not medical men*, officially sign the Homoepathic diplomas, I suppose, though I have never seen one of the documents.

Thanking you for your letter, I am truly yours,

A. B. PALMER.

Medical News Items.

PIUS HOSPITAL.

On the south-west corner of 14th and O'Fallen streets the Franciscan Sisters have commenced the erection of a new hospital, which will be named the Pius Hospital, in honor of Pope Pius IX. It will be 58 feet front and 60 feet deep, three stories high, besides the basement; the latter is built of dressed stone, and is nearly finished. The walls will be of brick. There will be 27 rooms, besides the chapel and the dormitories in the attic for the sisters. The building will cost about $15,000. The ground cost $10,000, and is 100 feet by 125 feet. It was purchased from Father Henry. The basement will be used as a kitchen, and a refectory. The second floor will contain the chapel, reception rooms, working departments, etc. The third story will contain the wards for patients, and will be arranged according to the peculiar ideas of the Mother Superior, Sister Bernardo. She thinks, and correctly so, that the sick can be cared for and more easily managed in small rooms than large wards. No room will contain more than two or three beds, and to insure the utmost quiet, the partitions will all be of brick.

This being a private undertaking, it is intended for patients that are able to pay at least some compensation in return for nursing, though the Sisters would not ask a fixed price; nevertheless, the poor will not be refused. To supply the wants of hundreds of worthy poor, that are not able to compensate a physician, there will be held an out door clinic, a daily surgical clinic, a daily medical clinic, an eye and ear clinic, and a children's clinic. Each of these will be under the control and charge of gentlemen who are competent and well-known to the community and respected in the profession. They are to give their time gratis for the benefit of the Hospital. The Hospital is open to all alike, *i. e.*, to all denominations and nationalities.

The sisters came here five years ago from Metz, Germany, where they control a similar institution. The Mother Superior has for assistants, Sisters Alfosa and Cecilia; they all possess most excellent administrative ability, and their endeavor will be to conduct the Hospital in the most impartial manner, having in view only the comfort of those that come under their care. They intend to make it a *home* for the sick.

The patients shall have the privilege to select their own physician, and as the Hospital is not built for the benefit of a single individual or class, but is cosmopolitan, it will be open to the

profession; therefore, whosoever chooses, can send a patient, and can treat him there, just the same as if he were in a private residence. There is no doubt but that the sisters will soon gain the confidence of the whole profession, by the kind care that they will bestow upon their patients. We wish God s speed.

Hon. Henry S. Spaunhorst, by the request of the sisters and the Catholic clergy, has taken charge of the business affairs as manager in the erection of the building.

The Hospital will be under the exclusive control of Mother Bernarda. E. B.

Editorial.

The Yellow Fever.

The yellow fever scourge still rages with unabated fury in our Southern cities. We learn from the Surgeon General's report, (which we receive weekly,) that at New Orleans there were, during the week ending September 6th, 1732 new cases of yellow fever, and 526 deaths; at Vicksburg, during the same week, 181 deaths; and, in Memphis for the week ending September 5th, 529 deaths. As it is altogether likely that at least one-fourth of the inhabitants have left these cities, the annual death rate per 1,000 living in New Orleans is 173.11; in Memphis, 743.45; in Vicksburg, 627.46. This is, indeed, a frightful mortality. Later advices from these cities inform us that the situation is simply indescribable. The physicians are so over-worked that they do not find time to give in their reports of new cases and deaths. The malignancy that the disease has assumed, and the rapidity of its spread to smaller and inland towns, makes the future outlook for our friends in the South sad and gloomy indeed.

It is pleasing to note the liberality with which aid, financially, is being sent by Northern cities.

We have great reason to rejoice that, although there are quite a large number of the refugees from the stricken districts in our midst, we have wholly escaped this fearful scourge, nor is it at all likely, with the cool winds and dry atmos-

phere that we have been having, that it will affect a single resident.

Now, what lesson must city officials learn from this? We are informed, by good authority, that that portion of New Orleans in which the yellow fever took its start, is in just as filthy a condition at the present time as it was twenty five years ago. Their narrow alley-ways and their back-yards, etc., have been allowed to become filthy, and to remain so. This is the condition of that portion of every city or town in which the fever originated.

Depopulated Grenada is a terrible example of this. Through this town runs a sewer, more properly a ditch, for it is covered in a few places only. This drains their stables, privies, etc. At one of the covered places of this ditch, the outflow was choked by the carcasses of dead animals. It would not require many weeks, or even days, for an epidemic of some kind of a disease to originate in such a place.

Those persons who must abide in the infected district, should reside, as far as possible, from places that give forth emanations from decaying vegetables or animal substances. Their surroundings should be maintained scrupulously clean; all excesses in eating and drinking should be discontinued at once; exposures to night air even by an open window should be avoided; should not take cold; should sleep regularly; and, as the mind has an influence on the body, everything of a depressing nature should be avoided. As a prevention of every disease of a malarial origin, no remedy in the world equals quinine.

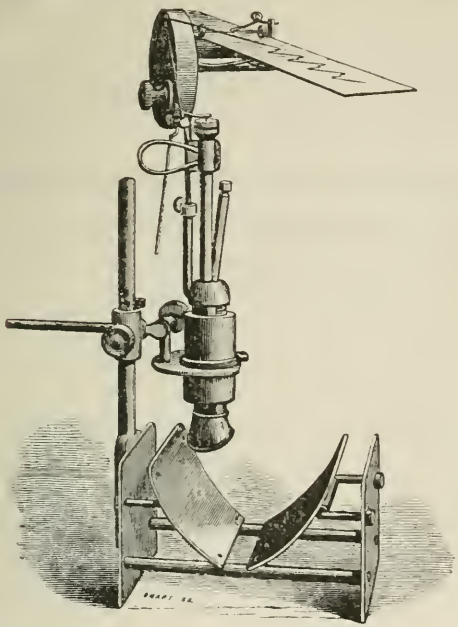
Ice in Yellow Fever.

Dr. C. H. Hughes writes from Dubuque, Ia., saying that he has suggested to his sister, a resident of Memphis, Tennessee, "to employ about her premises ice without stint." He believes that the spread of the yellow fever can be greatly stayed, and many lives saved by putting large quantities of ice in the sewers, streets and dwellings of any infected city. The only thing in the way of putting this to a test, is the utter impossibility of getting a sufficient *quantity* of ice.

New Instruments.

POND'S IMPROVED SPHYGMOGRAPH.

This instrument consists of a holder for the wrist, cylinder with a spring balance for weighing the pressure, tracing pen or needle watch-work for moving the paper or mica slide. The



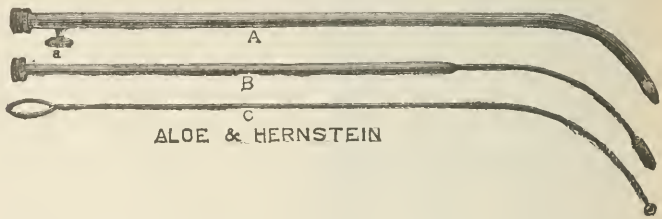
cylinder is filled with liquid (water is the best); the tube that screws on the cylinder is a small glass float, that rises and falls with the pulse beat and strikes the arm of the needle. Each pulsation of the artery will be accurately traced on the slide, as seen in the following cut.

This instrument can be detached and the *lever attachment* screwed on to the same cylinder. The lever attachment combines all the delicate qualites of the fluid instrument and is by many preferred, as it is easier and quicker to use.

A NEW INTRA UTERINE APPLICATOR.

BY WILLIS P. KING, M. D., SEDALIA MO.

The object of this Instrument is to make applications to the cavity of the uterus without touching the canal of the cervix. Every physician who has treated uterine diseases has experienced the great difficulty that is always met with, in passing medicated sponge or cotton into the cavity through the cervix, even after dilating the cervix with a sponge tent: the walls will collapse as soon as the tent is withdrawn, and in passing the medicated cotton, nearly all of the medicine intended for the cavity is wiped off by the walls of the cervix. The instrument is especially intended for use in the treatment of acute and chronic endometritis, but may be used in making any application to the cavity for any purpose whatever.



The body of the instrument, "A" is like a silver male catheter, with about one-half or three-quarters of the end cut off, leaving the instrument open at both ends. The staff "B" has a jointed end piece, which, when in place, completes the curve of the instrument; the staff and end piece are held in place by the screw "a," the silver wire "C" is used to make the application, having cotton rolled upon the end, and saturated with the fluid to be applied; "A" shows the instrument as it should be introduced. It can be used with or without a speculum; oil the instrument, take it in the right hand, the left forefinger should be introduced into the vagina until the external os is reached: the os should be pulled slightly forward, and the instrument should then be slid along the finger until the os is reached, when it should be introduced in the same way that a catheter or bougie is to dilate the cervix. After the operator is satisfied that the mouth of the instrument has passed the internal os, the screw "a" is loosened, and the staff withdrawn, this leaves the open mouth of the body of the instrument above the internal os, and pointing into the cavity of the uterus, the silver wire "C," with the cotton may now be dipped in the fluid intended for the application, the wire is then passed through the body of the instrument, and into the uterine cavity, and the application made. This may be repeated several times, if enough is not used at first. If it is desired to make an application to the canal of the neck also, after making it to the body, the wire can be passed through, and the instrument can be slowly withdrawn, letting the cotton swab follow it out through the cervix, until the end of the instrument reaches the external os, when the swab can be drawn into the instrument, and all withdrawn through the vagina together.

Book Notices and Reviews.

FOWNES' MANUEL OF CHEMISTRY—PRACTICAL AND THEORETICAL. Revised and Corrected by HENRY WATTS, B. A., F. R. S., etc. Edited by ROBERT BRIDGES, M. D., Professor of Chemistry in Philadelphia College of Pharmacy; pp. 1027. HENRY C. LEA, publisher, Philadelphia.

This work has long held a high position in our best educational institutions, literary as well as medical. The present edition is greatly enlarged. Mr. Watts has done all that the present advanced state of the science demanded, and has made Fownes' the equal of any similar work now before the public. Within the last ten years chemistry has undergone a great revolution; so that those who have not kept pace with the changes the science has experienced, will find that he has much to unlearn. The same things come to him under new aspects. Some things are not now what they were once thought to be. The science has almost an entirely new language. But all that is new will be found in the present edition of Fownes, and the professor of chemistry can hardly do better than to stand by the old favorite.

ANATOMY, DESCRIPTIVE AND SURGICAL. By HENRY GRAY, F. R. S., Fellow of the Royal College Surgeons, and Lecturer on Anatomy at St. George's Hospital School. With 522 engravings on wood. The drawings by H. V. CARTER, M. D., and DR. WESTMACOTT. The dissections jointly by the AUTHOR and DR. CARTER. With an Introduction on GENERAL ANATOMY AND DEVELOPMENT. By T. HOLMES. M. A., Cantab., Surgeon to St. George's Hospital; Mem. Corresp. de la Soc. de Chir. de Paris. A New American from the Eighth and Enlarged English Edition. To which is added LANDMARKS MEDICAL AND SURGICAL. By LUTHER HOLDEN, F. R. C. S., Surgeon to St. Bartholomew's and the Foundling Hospitals. Publisher, Henry C. Lea. 1878. Price, Cloth, $6.00, Leather, raised bands, $7.00. (For sale by the St. Louis Book and News Co.)

This is the most complete Edition of the most popular Anatomy in the English language. Dr. R. J. Dunglison says in his notice "The recent work of Mr. Holden has attracted so much attention, as affording, within brief compass, exactly the information required by practitioners in the application of anatomical knowledge, that the publisher has hoped, by appending it, to render the volume still more acceptable to those for whose use it is intended."

Besides this, there are alterations in the sections on Micro-

scopical Anatomy, and on Development as the ever-increasing activity of research in those branches of science has seemed to require. Some of the new illustrations have been borrowed, says the Editor, from Frey's Histology, Stricker's Hand-book, and Quain's Anatomy.

It is quite unnecessary to enter further into a description of this well-known work, as it has been long in use as a text-book. There is not a dissecting room in the land that does not contain at least a dozen of them

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY. Vol. II. For the year 1877. 8vo., pp. 697 with index of Gynæcological and Obstetrical Literature of all countries, from July 1st, 1876, to January 1st, 1877. Houghton, Osgood & Co., Boston. 1878. Price, $6.50.

This magnificent volume is made up of the Proceedings and the Papers read at the second annual meeting of the American Gynæcological Society, held in Boston, May 30, 31, and June 1, 1877. Even a glance at the names of the authors will indicate the value of the book.

One of the attractions of the work, is the heliotypes and lithographs that elucidate the text. The lithographs in Dr. Dalton's paper on the "Corpus Luteum" are quite instructive. Dr. Byrne in his paper on "Amputation of the Cervix Uteri," shows the advantages of the galvanic cautery over other means. He gives seven cases, in each of which he met with encouraging success. The discussion of this paper by Dr. Goodell, who spoke in favor of Dr. Byrne's method; by Dr. John Scott, who dissented, and by Drs. Byford and Noeggerath, are really interesting and instructive.

In closing the discussion on "Dilation of the Cervix for Hemorrhage," by Dr. G. H. Lyman, he says "The theory which I wish to advance is, that there is a constriction of the vessels at the internal os, giving rise to congestion of the tissues above; that such constriction, doubtless, is due to some morbid condition beneath the mucous membrane; hence the operation is beneficial, although the openings through the canal be apparently sufficiently large. May it not be that many, if not all of the hyperplastic conditions found in the fundus, are due to constriction, or to some morbid condition of the vessel at the point indicated, hence being mere effects and not causes?"

A noticeable feature of these transactions is that the Discussions are placed immediately after those papers on which discussions were made. This is new in the getting up of Society Transactions, and it is sensible. It manifests *what* papers were of interest to the Society and it insures the perusal of such papers by the receiver of the book.

It is printed on fine tinted paper with clear type, and is bound in red cloth, gilt on top. Messrs. Houghton, Osgood & Co. have good cause to feel proud of their book.

Atlas of Skin Diseases. By Louis A. Duhring, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania; Physician to the Dispensary for Skin Diseases. Philadelphia; Dermatologist to the Philadelphia Hospital, etc. Part IV. Vitiligo, Alopecia areata, Tinea favosa, Eczema (rubrum). Philadelphia: J. B. Lippincott & Co. 1878. Price, $2.50. (For sale by the St. Louis Book and News Co.)

Dr. Duhring is maintaining in this Part, the reputation that he has made in the three preceding Parts. Illustrations are frequently found in medical books when they are not needed. Space should not be given to them where words will convey the desired information, nor should they mar the book when they do not give that aid to the eye that cannot be intimated by words. In diseases of the skin, colored illustrations are indispensable to their description.

No one who is at all acquainted with the appearance of Eczema but will at once recognize the truthfulness of the colors on the plate representing this disease. The opportunities of Dr. Duhring enable him to illustrate his clinical remarks by typical cases.

While no fault can be found with treatment, either constitutional or local, would it not be well to inform the reader of its result?

Encyclopedia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. xiii. Diseases of the Spinal Cord and Medulla Oblongata, by Prof. Wilhelm Heinrich Erb, of Heidelberg, Baden. Translated by E. G. Geoghegan, M. D., of London; Edward M. Schauffler, M. D., of Kansas City, Mo.; D. F. Lincoln, M. D., of Boston, and J. A. McCreery, M. D., of New York. A. H. Buck, M. D., New York, Editor of American Edition; pp. 975. Wm. Wood & Co., New York, 27 Great Jones Street, 1878.

We have had this large work on our table for some weeks. A part of it we have looked over; a part we have read carefully, and a part we have studied. The part of the work on the "Diseases of the Spinal Cord," occupies 822 pp.; that on "Diseases of the Medulla Oblongata" the remainder of the book. The author says, in his introduction, "We write for the practicing physician, who encounters the actual diseases from day to day. For him it is important that a description should possess unity and clearness, and should give him something to work by. We have, therefore, laid the chief stress upon the clinical presentation, in making which we have rested mainly upon the basis of pathological physiology, bestowing, meanwhile, a due share of attention upon pathological anatomy."

"One thing more should be added. After long deliberation, we have decided that the special descriptions of disease should be preceded by a general account, which has grown to a great size,

but will not, we hope, be found superfluous or worthless." Although the general account that is given of the diseases may not be worthless, nevertheless from our stand-point, it is somewhat tedious. There can be but one opinion expressed, and that is, that Prof. Erb. has been very thorough in his work. That part of his work on the "Diseases of the Medulla Oblongation" has impressed us very favorably.

Books and Phamphlets Received.

Transactions of the Iowa State Medical Society.

Cases of Double Uterus and Vagina. By JAMES R. CHADWICK, M. D.

Announcement and Catalogue of the Detroit Medical College, Detroit, Mich.

Remarks on Social Conservatism. By J. W. SINGLETON, M. D., Paducah, Ky.

Twentieth Annual Announcement of the Chicago Medical College, Chicago, Ill.

Minutes of the State Medical Society of Arkansas, at its Third Annual Session.

Report to His Excellency, the Governor, of the Thirty-sixth Missouri University Catalogue, 1877-78.

Second Annual Meeting of the American Medical College Association, held at Buffalo, N. Y., June 3d, 1878.

Seven Springs Iron and Alum Mass, or Compound Ferruginous Mass. By W. F. BARR, M. D., of Abingdon, Va.

The Annual Announcement of the Department of Medicine and Surgery of the University of Michigan for 1878-79.

Eighteenth Annual Announcement of the Bellevue Hospital Medical College, with the Annual Catalogue for 1877-78.

Remarks on Naso-Pharyngeal Catarrh. By M. F. COOMES, M. D. [From the American Medical Bi-Weekly, June 8, 1878.]

One Hundred and Thirteenth Annual Announcement of the Medical Department of the University of Pennsylvania, 1878-79.

Herpetic and Eczematous Eruptions in the Etiology of Chronic Nasal Catarrh. By E. L. SHURLY, M. D., Detroit.

Certain Symptoms of Nervous Exhaustion. By GEORGE M. BEARD, M. D. [Reprint from Virginia Medical Monthly, June, 1878.]

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighth Annual Session, held at Baltimore, Md., April, 1878.

Fracture of the Femur. By C. R. PARKE, M. D., Bloomington, Ill. [Read before the McLean County Pathological Association, July 1, 1878.

The Functions of the Anal Sphincters, so-called. By JAMES R. CHADWICK, M. D., of Boston. [Reprint from Vol. II Gynæcological Transactions, 1878.

Amputations and Excisions of the Cervix Uteri; their Indications and Methods. By J. BYRNE, M. D., M. R. C. S. E. [Reprint from Vol. II Gynæcological Transactions, 1878.

Cholecystotomy for the Removal of Gall-Stones in Dropsy of the Gall-Bladder. By J. MARION SIMS, M. D. [Reprinted from the British Medical Journal, June 5th, 1878.]

"An Open Letter" to EUGENE GRISSOM, M. D., LL. D., Etc., Superintendent of the Asylum for the Insane, at Raleigh, North Carolina, from WILLIAM A. HAMMOND, M. D., of New York.

True and False Experts. By EUGENE GRISSOM, M. D., LL.D., to which is appended a rejoinder to Dr. Hammond's "Open Letter." [From the American Journal of Insanity, for July, 1878.]

An Address delivered before the Trigg County Medical Society, at Cadiz, Ky., Monday, May 8, 1876, by J. W. SINGLETON, M. D., of Paducah Ky. [Reprint from the Cincinnati Lancet and Observer, Nov. 1877.,

Suppurative Inflammation of the Middle Ear. By EUGENE SMITH, M. D., Detroit, Ophthamalic and Aural Surgeon to St. Mary's Hospital, Surgeon in charge of St. Mary's Hospital, Free Eye and Ear Infirmary, Etc.

Medico Legal Evidence, Relating to the Detection of Human Blood Presenting the Alterations Characteristic of Malarial Fever. By JOSEPH JONES, M. D. [Reprinted from the New Orleans Medical and Surgical Journal for August, 1878.]

The Soft Palate, Its value in diagnosis as compared with the tongue in derangement of the liver, malarial diseases and exanthematous fevers. By WM. ABRAM LOVE, M. D. [Reprint from the Transactions of the Medical Association of Georgia, 1878.]

METEOROLOGICAL OBSERVATIONS.

By A. WISLIZENUS, M. D.

The following observations of daily temperature in St. Louis are made with a MAXIMUM and MINIMUM thermometer (of Green, N. Y.). The daily minimum occurs generally in the night, the maximum at p. m. The monthly mean of the daily minima and maxima added and divided by 2, gives quite a reliable mean of the monthly temperature.

THERMOMETER, FAHRENHEIT—JULY, 1878.

Day of Month.	Minimum	Maximum.	Day of Month.	Minimum.	Maximum.
1	72.5	85.0	18	80.0	94.0
2	**64.5**	89.0	19	81.5	98.5
3	67.0	76.0	20	79.0	99.0
4	70.5	89.5	21	78.0	96.0
5	72.0	88.5	22	69.5	87.0
6	71.0	85.0	23	67.0	86.5
7	71.0	84.5	24	69.5	89.0
8	74.0	90.0	25	70.5	91.0
9	74.0	92.5	26	74.5	89.5
10	77.5	95.0	27	72.5	85.5
11	78.0	95.0	28	70.0	87.5
12	79.5	95.5	29	69.0	83.0
13	81.0	9.0	30	71.0	87.5
14	89.0	9.0	31	76.5	91.5
15	81.5	**99.5**			
16	81.0	99.0	Means	71.9	91.1
17	82.0	99.5	Monthly Mean	81.5	

Quantity of rain, 0.02 inches.

MORTALITY REPORT.---CITY OF ST. LOUIS.

FROM JUNE 30, 1878, TO JULY 27, 1878, INCLUSIVE.

Small-Pox		Cholera Infantum	82	Hydrocephalus and	
Measles	4	Inanition, Want of		Tubercular Men-	
Syphilis, Cong'al		Breast Milk, etc.	41	ingitis	12
Scarlatina	4	Alcoholism	5	Meningitis and En-	
Pyæmia		Rheumatism and		cephalitis	
Erysipelas	2	Gout	1	Direct Effect of So-	
Diphtheria	9	Cancer	8	lar Heat	163
Membranous Croup	2	Phthisis Pulmon	47	All Diseases of the	
Whooping Cough	8	Bronchitis	6	Brain and Ner-	
Typhus Fever		Pleuritis		vous System	60
Typhoid Fever	11	Septicæmia	4	Cirrhosis of Liver	
Cerebro Spinal Fe.	2	Pneumonia	19	and Hepatitis	11
Remittent, Inter-		Heart Diseases	16	Enteritis, Gastro-	
mittent, Typho-		Other Diseases of		Enteritis, Peri-	
Malarial, Con-		Respir'y Organs	10	tonitis, and Gas-	
gestive and Sim-		Entero-Colitis	5	tritis	38
ple Continued		Marasmus—Tabes		Bright's Disease	
Fevers	12	Mesenterica and		and Nephritis	5
Puerperal Disea's	3	Scrofula	30	Other Diseases of	
Diarrhœal "	25	Convulsions	6	Urinary Organs	6

Apoplexy	20	Total Deaths from	
Cyanosis and At-		all Causes	837
electasis	2	Total Zymotic Dis-	
Premature and Pre-		eases	251
fernatural Birth	10	Total Constitution-	
Surgical Operat'ns		al Diseases	104
Deaths by Suicide	3	Total Local Dis-	
Deaths by Accid't	13	eases	447
		Total Develop'tal	
		Diseases	12
		Deaths by Viol'ce	23

CHAS. W. FRANCIS, *Health Commissioner.*

COMPARATIVE MORTALITY RATES.

CITIES	Estimated Population, July, 1878.	Total Mortality for four weeks, ending July 27, 1878.	Annual Death Rate per 1000 for the four weeks.
New York	1,093,171	2,854	33.93
Philadelphia	876,118	1,617	23.99
Brooklyn	549,438	1,157	27.38
St. Louis	500,000*	837	21.75
Chicago	160,000	983	27.78
Boston	375,176	701	24.26

*Estimated population, May 1, 1877, 501,189.

Trommer's Extract of Malt.

The rapidly increasing demand for our IMPROVED EXTRACT OF MALT, during the four years that it has been manufactured and offered to the medical profession in America, justifies the belief that in its production here we are meeting a generally felt want.

Long experience in manufacturing Malt Extract has enabled us to completely overcome the many difficulties attending its manufacture in large quantity; and we positively assure the profession that our Extract of Malt is not only perfectly pure and reliable, but that it will keep for years, in any climate, without fermenting or molding, and that its flavor actually improves by age. Our Extract is guaranteed to equal, in every respect, the best German make, while, by avoiding the expenses of importation, it is afforded at less than half the price of the foreign article.

The Malt from which it is made, is obtained by carefully malting the very best quality of selected Toronto Canada Barley. The Extract is prepared by an improved process, which prevents injury to its properties or flavor by excess of heat **It represents the soluble constituents of Malt and Hops**, viz: Malt Sugar, Dextrine, Diastase, Resin and Bitter of Hops, Phosphates of Lime and Magnesia, and Alkaline Salts.

Attention is invited to the following analysis of this Extract, as given by S. H Douglas, Professor of Chemistry, University of Michigan, Ann Arbor.

TROMMER EXTRACT OF MALT CO:—I enclose herewith my analysis of your Extract of Malt:

Malt Sugar, 46.1; Dextrine, Hop-bitter, Extractive Matter, 23.6; Albuminous Matter (Diastase), 2.469; Ash—Phosphates, 1.712; Alkalies, .377; Water, 25 7 Total, 99.958.

In comparing the above analysis with that of the Extract of Malt of the German Pharmacopœia, as given by Hager, that has been so generally received by the profession, I find it to substantially agree with that article

Yours truly, SILAS H. DOUGLAS,
Prof. of Analytical and Applied Chemistry.

This invaluable preparation is highly recommended by the medical profession, as a most effective therapeutic agent, for the restoration of delicate and exhausted constitutions It is very nutritious, being rich in both muscle and fat producing materials.

The very large proportion of Diastase renders it most effective in those forms of disease originating in imperfect digestion of the starchy elements of food.

A single dose of the Improved Trommer's Extract of Malt, contains a larger quantity of the active properties of Malt, than a pint of the best ale or porter; and not having undergone fermentation, is absolutely free from alcohol and carbonic acid.

The dose of adults is from a dessert to a tablespoonful three times daily. It is best taken after meals, pure, or mixed with a glass of milk, or in water, wine, or any kind of spirituous liquor. Each bottle contains 1 1-2 lbs of the Extract.

Our preparations of Malt are for sale by druggists generally throughout the United States and Canadas, at the following prices:

EXTRACT	OF	MALT,	*With Hops (Plain)*,		$1.00
"	"	"	"	*Pyrophosphate of Iron (Ferrated)*	1.00
"	"	"	"	*Cod Liver Oil*	1.00
"	"	"	"	*Cod Liver Oil and Iodide of Iron*	1.00
"	"	"	"	*Cod Liver Oil and Phosphorus*	1.00
"	"	"	"	*Hypophosphites*	1.50
"	"	"	"	*Iodides*	1.50
"	"	"	"	*Alteratives*	1.50
"	"	"	"	*Citrate of Iron and Quinia*	1.50
"	"	"	"	*Pepsin*	1.50

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TROMMER EXTRACT OF MALT CO.,

FREMONT, OHIO.

NEW REMEDIES.

☞**Your Special Attention is Called to the Note Below.**

QUININE FLOWER.—Used in the South during the late war, to some extent, as a substitute for quinine, and now introduced to the profession by us.

YERBA REUMA.—From the Pacific slope, now introduced by us. Used in diseases of the mucous passages, especially in catarrh, acute and chronic, leucorrhœa, gonorrhœa and dysentery.

KAVA KAVA.—From the Sandwich Islands. First introduced by us. An efficient and agreeable remedy in gonorrhœa, gleet, gout and rheumatism.

CASCARA SAGRADO.---Introduced by us. It has long been regarded by the residents of the Pacific coast as a sovereign remedy for habitual constipation and dyspepsia.

COTO BARK.--From Bolivia. First introduced by us. It is said to be almost a specific against diarrhœa in its various modifications.

COCA LEAVES.--A powerful nervous excitant, giving great vigor to the muscular system and sustaining the human frame under extreme physical exertion and fatigue.

PARAGUAY TEA.—Largely used in South America as a stimulant to sustain the system when undergoing hunger, or great fatigue during the summer heats.

GUACO LEAVES.--This valuable remedy was also first introduced by us. Its use is indicated in cholera, diarrhœa, chronic rheumatism, etc.

BERBERIS AQUIFOLIUM.---A new California drug, now introduced by us, possessing extraordinary powers as a combined alterative and tonic, and valuable in syphilitic and scrofulous diseases, salt rheum, etc.

BOLDO LEAVES.—First introduced by us. The new South American tonic. In France it has been employed in cases where quinine could not be tolerated.

ARECA NUTS.—First introduced by us. From India. Strongly astringent. Used by Dr. Morris, of England, in the removal of tape worm.

GRINDELIA SQUARROSA.—From California. First introduced by us. An excellent and efficient remedy in malarial diseases, enlarged spleen, etc.

YERBA SANTA.--From northern California. First introduced by us. This drug is a standard remedy in the Western States in bronchial and laryngeal disorders.

FUCUS VESICULOSUS. -First introduced by us. An anti-fat remedy of great merit. No derangement of the stomach or general system seems to result from its use.

GRINDELIA ROBUSTA.--From the Pacific Slope. Since this drug was first introduced by us, it has earned for itself a reputation for almost specific curative action in asthma. NOTE.—There are several false varieties of this plant, which are offered as genuine. Physicians will readily perceive the difference in the taste of the fluid extract, as compared with our preparation of the TRUE plant.

KOOSO, GUARANA, BAEL FRUIT BUCKEYE BARK. URTICA DIOICA SOAP TREE BARK SANDAL WOOD, PULSATILLA, SUNDEW.	USTILAGO MADIS, MAGNOLIA FLOWERS AILANTHUS GLANDULOSA, FIVE-FLOWERED GENTIAN, NIGHT-BLOOMING CEREUS GRINDELIA COMPOUND, XANTHIUM SPINOSUM, WATER FENNEL SEED, POMEGRANATE BARK, EVENING PRIMROSE.	DAMIANA, BEARSFOOT, BROOM TOP, COUGH GRASS, CASTOR LEAVES PARSLEY SEED, ARBOR VITÆ, CHIRETTA, KAMALA.

NOTE.—For a detailed description of the botanical history and medicinal application of each drug, send stamp for our descriptive circular. We will also furnish our price list if desired. Any inquiry regarding these New Remedies will be promptly answered.

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☞In corresponding with advertisers please mention **The Medical Journal.**☜

MAY 25TH, 1878.

Sitz Bath.

DR. MCPHEETERS:—I often recommend the hip bath in the treatment of uterine and vaginal disease. Having had difficulty in finding a convenient sitz bath, those in shops being exceedingly uncomfortable, I have had one made; it is as comfortable as a rocking chair and needs comparatively little water. (The doctor presented the bath for examination.) I believe if the bath were used more frequently, both as a therapeutic and prophylactic agent, we would have much less disease of this kind to treat.

Tetanus.

DR. MUDD:—I have seen three cases of tetanus this spring. One was a young German who had a severe injury of a finger. The tetanic spasms continued for three or four weeks but were at no time severe. He recovered with no other treatment than arsenic, chloral and bromide of potassium. The second case was that of an old man who had his hand crushed by a wagon wheel passing over it. Tetanus appeared on the sixth day and he died on the eighth. The third case was one that Dr. Wyman asked me to see with him, at the Marine Hospital. It was a man whose hand had been crushed and there was a gangrenous ulcer on the back of his hand. He had tetanus, but I am not sure how long he had it before I saw him. The dorsal and palmar surfaces were so much involved that the only local treatment we could use was emollient applications. The man's condition was unsatisfactory, temperature high, pulse rapid, and he was suffering intensely. The spasms were irregular—not severe—but well marked, with great difficulty of breathing and deglutition. I had seen some reports of cases of this kind in the "*Lancet*" in which a London surgeon had stretched the nerves with good result, and we adopted the method. We cut down upon the musculo-spiral, ulnar and median nerves, at the border of the coraco brachialis muscle, near the point where the musculo-spiral passes behind the humerus, and stretched each of the branches. To determine the amount of stretching I measured the amount of force applied. I lifted the nerves by the handle of the knife and caught one branch between my finger and thumb of one hand and hanging a weight to the little finger of the other hand grasped the nerve with thumb and finger of this hand; relaxed the muscles and let the tension of the weight fall upon the nerves. I think I used four pounds on one nerve and possibly five or six pounds on the others. Only one nerve seemed to yield. Am unable to say what amount of sensation or motion remained, but the spasms continued, and I believe became more violent after the operation. The patient died the next day.

Fibro-fatty Placenta.

Dr. Prewitt:—I have here a placenta removed this morning which I had some trouble in detaching, as there seemed to be some fibrous points issuing from the uterine wall to the placenta. After it was removed I found several fibrous looking masses and hard nodules, which felt firm and solid in contrast with the tufts in the other portions of the placenta. One is not far from the edge of the placenta and looked white and fibrous when first detached.

June 1st, 1878.

Arterial Lesions in Syphilis.

Dr Ford—I here present, Mr. President, some specimens taken at a post mortem held, unfortunately, some ten days ago, so that it has been necessary to preserve them in alcohol. The case occurred at the St. Louis Mullanphy Hospital, and was under the care of Dr. Carson, whom I assisted in the post mortem, and who has kindly loaned me the specimens for exhibition to the Society.

There was a history of syphilis lasting some six or seven years back. There were evidences of tertiary syphilis at the time; the duration of the attack of which the patient died was four or five weeks. There was no hemiplegia nor affection of sensibility, nor any impairment or modification of motility whatsoever except general paresis. The man went to bed because he felt too weak to go about, complained constantly of headache and died gently without convulsions.

On post mortem we found evidences of wide spread textural changes in various organs, mostly of a sclerotic nature. There had evidently been a general deposit or elaboration of material which had been gradually converted into connective tissue in the course of time. There was no amyloid degeneration anywhere. The kidneys, as we see them here, were smaller than normal; their cortical portions very much thickened. Nodulations, hard enough to creak under the knife, were dispersed throughout both kidneys. Unfortunately, the urine was not examined during the progress of the case; it would have been interesting to have done so. The heart was apparently normal. The arch of the aorta was somewhat dilated, and patches of old deposit, not very marked however, were visible on its inner surface. The valves were healthy. The spleen presented a very peculiar appearance; it is now discolored, but when the body was opened it was perfectly white; the organ is much shriveled and contracted. This shriveling is observable only on its inner or gastric surface. Upon its external or convex surface it is perfectly smooth, and for a thickness of from a quarter to a half an inch is converted into a white cartilaginous tissue, so hard that it is difficult to cut it. This tissue exactly resembles cartilage, the entire surface of the spleen and nearly one-half of its thickness has undergone this transformation. On

referring to Rokitansky, I find that he alludes to this kind of transformation of the spleen, as *cartilaginous degeneration.* He does not speak of its relation to systemic conditions or give any explanation of it. I should regard it as a local evidence of a general disposition towards the formation of connective tissue out of some prëexisting deposit, probably gummy, which is characteristic of a syphilitic cachexy.

But the most interesting change, the one which doubtless was the direct cause of his death, was in the brain. As the encephalon was removed from the cranial cavity, we observed that the left posterior lobe was softened, so much so as to fall to pieces, while the rest of the brain was perhaps even firmer than usual. On section the brain was almost exsanguine; there was scarcely any redness and no distinct *piqueté* around the circumference of the softened lobe. The arteries were universally in bad condition. The anterior and middle cerebral arteries were nodulated but pervious. Bead-like nodulations existed on all the branches forming the Circle of Willis. The right posterior communicating artery was barely patulous. The left post. com. artery was entirely occluded. On both of the posterior cerebral arteries nodulations about three-sixteenths of an inch thick could be observed, and on passing a bent probe down the left post. cerebral artery, at about an inch from its origin in the basilar, it was found to be wholly occluded by a knot the size of a small buck-shot. It was evidently in consequence of this obliteration, partly due to chronic, morbid alteration in structure of the vessel, and partly to local thrombosis, perhaps, that the tissue of the brain supplied by this vessel, viz., the under and outer side of the posterior lobe of the cerebrum, had fallen into the necrotic condition in which we found it.

Here, therefore, we have one more of this class of cases in which the vessels are affected by syphilis, cases to which Lancereaux has lately drawn especial attention in a monograph on vascular lesions in syphilis. The lungs were adherent to the thoracic walls at all points, but were not otherwise especially examined.

The arteries of the brain had evidently contracted in consequence of the nodulations described as existing in their walls, and which nearly obliterated their cavity. Hence, the brain in general must for some time have been very imperfectly nourished. A complete occlusion of the posterior cerebral artery of the left side was necessarily followed by necrosis of the nutritive territory of that artery. As I have said, there was no appearance of disease of the valves of the heart, capable of suggesting the formation or displacement of an embolic mass.

The liver was markedly involved in the general tissual deterioration, and was much shrunken without being nodular. Its texture was exceedingly firm, so much so that the finger could not be pushed through a slice half an inch thick without

very unusual force. The stomach was so much contracted as to resemble the colon. Death, as I have remarked, took place gently, by asthenia. An old cicatrix was found on the left side of the penis in the balano-preputial fold, of large size and considerable thickness. There were some patches of periosteal disease upon the tibia of the left side. There were no lesions of motility whatsoever excepting the general weakness; no obstruction of special sense, or noticeable alterations of general sensibility. The case leads us to call to mind the assertions of Brown-Sequard, in reference to the functions of the brain, and especially in regard to the localization of cerebral disease. We know how ably this distinguished author has shown that we may have almost any form of cerebral disease in the absence of the symptoms usually regarded as characteristic thereof, and how many diverse, and distinctly marked symptoms may exist, when there is either no disease of the brain at all, or the disease is in a totally different locality from that usually, and without doubt, in most cases, quite correctly indicated. But that we may have such extensive softening in the cerebrum proper, as existed in this case, without any hemiplegia or modification of sensibility, saving persistent headache and increasing adynamia, is surely a fact worth knowing and keeping constantly in mind.

Beef Extract.

Dr. Wm. Porter exhibited a preparation of liquid beef extract which had been made for him by druggists in this city. The fault with most preparations of the kind, is that they are made from meat which has undergone chemical changes, so that they should rank, as Dr. Newman had very justly remarked, only as *stimulants*. The preparation submitted by Dr. Porter was of a different character, containing twenty-one grains of phosphate of iron, calisaya bark, and thirty grains of extract of beef, prepared in a special manner, to the ounce, a stronger extract than we usually get in the drug stores according to ordinary formulæ.

Employment of the Forceps in Labor.

Dr. McPheeters:—I wish briefly to report the birth of a child of extraordinary size; I think, the largest I have ever met with, weighing, at birth, fifteen and a half pounds. Delivery was effected without the forceps, and without the slightest laceration. I examined, particularly, with regard to that matter. Labor progressed regularly, but most excruciating pains were felt in the rectum, showing that the head pressed unusually in that direction. The second stage of labor was somewhat protracted, the perineum and soft parts yielding with great reluctance, but by the persistent use of hot fomentations and other measures to the perineum, delivery was effected. I would like to call the attention of the Society, more particularly of its younger members, to the utility of hot fomentations to the perineum dur-

ing the terminal period of the second stage of labor. It has been my custom to employ them for nearly thirty-eight years. Their advantage is three-fold. They are always exceedingly grateful to the patient; they conduce to cleanliness, and they favor relaxation of the soft tissues of the perineum. In view of the prolongation of the second stage, and reluctant yielding of the floor of the pelvis, I presume my excellent friend, the President, would have had recourse to the forceps, and were I as dextrous in their use as himself, it is not improbable I would have done so myself. And yet, I am well satisfied, that, had the forceps been used in this case, the danger of laceration would have been much greater. I cannot conceive that the extreme distention of the perineum by the enormously large head could have permitted the introduction of the forceps and the application of its additional thickness to the sides of the head without inevitable laceration. For some moments, as it was, I was sure laceration must occur; and I had my lancet in hand, intending to make lateral incisions into the labia. I was glad to find afterwards that this would have been unnecessary.

I am in no fashion disposed to object to the use of the forceps when necessary, but I do object to its employment simply to relieve the accoucheur of the irksomeness of a long attendance or for the economy of his time, or as a relief for the exhaustion of the patient. Parturition is a natural process, and the nearer we keep to nature the better. There is much in the physiological nature of the relaxation of these parts; if we accord the time which nature demands, they are much more apt to yield under the alternations of pressure and quiet normal parturition, than to continuous pressure made by traction on the forceps. Nevertheless I by no means object to the use of the forceps in certain cases. I have often thought it would be requisite to use the forceps, when the case did perfectly well without them, and make it a practice, usually, to leave my forceps at home, preferring to send for them, lest I be precipitate in using them when they are not absolutely indispensable. In this case, I am satisfied that the super-addition of the thickness of the forceps-blades to the diameter of the head would have produced laceration. There was, however, no rupture at all, and the patient has got well without a bad symptom. The patient had had one child previously."

Dr. Maughs:—I will mention as an offset to Dr. McPheeters' case, one of a young woman in her first labor, which I conducted in company with Dr. Moore. The woman supposed she had gone ten months. It was an enormous child, and weighed sixteen pounds down weight, yet there was no rupture of the perineum. I cannot see how the forceps can injure the perineum; they protect it; they occupy, absolutely, no space; they exert compression on the head in the axis of its long diameter, and in the axis consecutively of the inferior strait and of the vulva. The diameter, which is so obnoxious to the perineum,

so likely to cause its rupture, is lessened at the expense of the diameter perpendicular to it. At the same time, by judicious pressure with the forceps, and appropriate traction, we pull the nape of the neck up against the symphysis pubis, which is altogether less dangerous than allowing it to be forced directly across the perineum.

Dr. Thos. Scott:—In regard to the use of the forceps, my opinion is, that more harm is done by neglecting to use it, than by using it. It is not a dangerous instrument. There is no danger of injuring the perineum, unless it is used very unskillfully. It often happens, for example, that the cord is coiled around the child's neck, and in such a case, the child is often lost by a failure to use the forceps. I had a case of the kind not long since. I was attending a German woman who had been sometime in labor and, at first, could see no reason why the child had not been born. But I noticed that after making a certain progress, it would recede again a considerable distance, between the pains. After waiting some little time, I told the woman the child would be be lost unless I applied the forceps. To this she at first strongly objected, but, having eventually overcome her opposition, I applied the instrument, and duly delivered her. The child was in a very critical condition; had I waited a very few minutes longer, it would have been dead. Two coils of the cord were wound about its neck, and it was on the very verge of being lost, almost completely asphyxiated. This is one case where a fine, healthy child was saved, which would infallibly have been lost by delay.

In another case, a man came to me in great excitement, begging me to go with him. He said he expected to find his wife dead before we could get to her. I asked if it was a labor case; he answered in the affirmative; so I took my forceps along with me, not expecting to find the woman alive. I found she had been in labor several days, and the pains had now completely subsided. The face of the child was presenting at the vulvar opening. There was nothing to do but apply the forceps; I did so, and in three minutes delivered her of a fine healthy boy.

I think, if used judiciously, no possible harm can accrue either to mother or child, by the use of the forceps.

Dr. Wm. Jounston:—Within the past few years, a doctrine has been promulgated far in advance of that of English or Continental schools, which it seems has been transmitted to St. Louis. The originator of this teaching is an Irishman. Dr. Hamilton, of Falkirk, a village a short distance from Cork; he states that he uses the forceps in three cases out of every five; he advises the young accoucheur always to take the forceps along with him to every case of labor. While the French physicians use the forceps only eleven times in two hundred cases, the Germans but once in one hundred and fifty cases, and the Scotch and English about as often, is it possible that we ought to follow the teaching

of this village Irishman, who tells us, that, regardless of the condition of his patient, he uses this instrument three times out of five?

Authorities in general declare that if the condition of the patient is good, and the soft parts normal, there is no indication for interference with the forceps or any other instrument. I must differ from my friend Dr. Maughs, who says that a blade an eighth of an inch in thickness does not occupy any space. I contend that uterine contraction forces the head into the pelvis with such power that it must narrow the diameter of the head as much as the forceps could. We should never use the forceps if the soft parts are in their proper anatomical condition, unless there is uterine inertia and there is danger lest the life of the child be lost by delay.

There is not a respectable author who has written on midwifery, who advocates the use of the forceps as it is now used. I do not believe there is a teacher of obstetrics within reach of my voice to-night who ventures to teach young men to apply the forceps before it becomes certain that its employment is absolutely indispensable. If we apply the forceps, and the soft parts are normal and we then make constant and forcible traction, we must in many cases rupture the perineum. But if there is uterine inertia, as Dr. Scott has remarked, I would certainly use the forceps, all teachers tell us to do so. But assuredly, the doctrine of this Irishman, ought not to be taught in the city of St. Louis, a doctrine which has never been taught except by himself.

As regards lateral incision, it would require more skill than I or other obstetricians would like to claim, to be able to affirm positively that the child's head is large or small. If incisions are made, they prevent relaxation; we must bear in mind that the dilatability of the soft parts of the vulvar opening and perineum is enormous; so much so that no man can say with certainty that rupture is or is not imminent in any given case.

Dr. Newman:—I do not think the doctor's statistics with regard to the frequency of the use of the forceps in Germany and France, etc., are cogent in the absence of collateral statistics as to the mortality of the mother and the child. I understood the doctor to say that no recent authors have recommended the frequent use of the forceps. I am sure that Simpson does so, and Duncan and Playfair, and many others likewise. I am a little surprised at the gentleman's argument that the forceps must occupy some notable space. The forceps, really, can be pressed into the integment of the head, so as to occupy no appreciable space, while it compresses the head. If it be true, as is believed by all intelligent physicians of the present day, that the danger to the mother and the child, all things being equal, is in proportion to the actual duration of labor, it seems to me, we ought to bear in mind that we have in the forceps an

instrument by which we may readily obviate such danger. When labor is protracted, the danger is very great to the mother, in a variety of ways, both as to the integrity of the soft parts concerned, and as to life itself; and we know that if the child is long compressed within the bony circle of the pelvis, its life will be surely endangered.

I suppose my friend Dr. Scott did not mean to be understood, absolutely, as he expressed himself, to the effect that where the cord is entwined about the child's neck, it must inevitably perish. We know that children have been born with the cord wound around the neck as much as twice, and have suffered no detriment.

Dr. Scott recognized the propriety of Dr. Newman's criticism, stating he had intended to allude to such cases only as jeopardizing the child's life, by obstructing delivery and inducing uterine inertia, and of course, the dangers to the mother and child of a protracted labor.

Dr. Hurt:—I think we may venture to assert that if a woman can be delivered without the forceps, she can be delivered with it; probably more quickly than without it. Hence, if we please, we may deliver all our cases with the forceps that can be delivered at all. The usual guide for the employment of the forceps, indicated by writers, is the necessity of their use for the accomplishment of parturition. Taking into consideration, the respective condition and proper risks of the mother and child wrought by delay, if a man chooses, in an extensive practice, to apply the forceps in three out of five cases, he can certainly do so, and obtain a better success in proportion to the number of his cases, than he who waits until the application of the forceps is formally indicated. It has been my practice to wait until necessity demanded the application before offering the aid of an instrumental delivery to my patients.

One of the most important aids afforded by the forceps, is in moulding the head. In cases of tedious labor, where we find every expulsive effort effects but partial extrusion—a partial advance followed by recession—we should not necessarily conclude that the cord is wound around the neck of the child, although such might be case; the phenomena may be due to the want of capacity or rigidity of the parturient passages. The vagina is funnel-shaped, its narrowest part being at its external orifice and the muscular structures surrounding the vagina may be sufficiently resistant to force the head back after each expulsive effort.

Wishing to obviate the use of the forceps, I have endeavored to mould the head in another way, by passing the fingers into the anal orifice. We know very well that at a certain stage of labor, the anal orifice lies, I may say, more than an inch below its natural position, and in cases where there is actual danger or

much delay, and the labor is sufficiently advanced for the head to rest upon the perineum, by a proper adjustment of the fingers turned under the frontal bone, with counter-pressure against the symphysis pubis on the other side, we can mould the head to a certain extent. This can also be effected, even without introducing the fingers into the anus, in some cases when there is not too great a development of the muscles. In a paper laid before this Society some years ago, I described this method, which has been noticed and commented upon in various journals, and been also cited by one of our German physicians of St. Louis, as a preferable plan to that advocated for similar purposes by a very prominent obstetrician.

Dr. Boisliniere:—It is not possible to treat this important subject otherwise than in the most cursory manner to-night; at some future time, if the Society desires to hear me, I will make some remarks upon the statistics of the use of the forceps. I congratulate myself upon being one of the earliest advocates of the use of the forceps in this city. I adopt as a motto: "Always take the forceps with you," because we may need it before a messenger *can put his boots on*. And if we are much tempted to use it, then we should do so; I use it whenever I am very much tempted. Dr. Johnston has quoted German authorities upon this subject, but he has omitted to mention a great German authority, *Schræder*, who uses the forceps once in every seven cases of labor. One of the most intelligent of the profession in this city, now dead, used the forceps about as often. The use of the forceps is getting to be acknowledged. Playfair, in his work on Midwifery, affirms that the profession is getting back to the use of the instrument. In medical opinion there is too much of the pendulum-movement.

I should say, however, that there should be strong evidence of dilatability to justify the use of the forceps. I do not apply the instrument unless it is necessary; and I wait until indications are very plain, as Dr. Hurt has remarked; the instrument is to be used to accomplish a labor which could not otherwise be properly terminated. When the child is passing through the soft parts of the mother, and there is impaction, the forceps is undoubtedly indicated. In cases of protracted labor, I use the forceps and change the diameter of the child's head with reference to the pelvis.

Dr. Johnston has stated that the chief objection to the use of the forceps, is the temptation to employ undue and constant traction. There is very little pulling to be done with the forceps when properly handled. All we require is to change the diameters of the child's head, and it will be born by the expulsive force of the uterus. Instead of tending to induce laceration, the forceps protects the perineum. The forceps should not be abused or decried; it is a noble instrument, and does not deserve such treatment.

Dr. Johnston:—Dr. Boisliniere has given us his experience on the practical use of the forceps; as he stated, I think, once in seven or eight cases. I would like to ask Dr. Maughs in what proportion of cases he uses the instrument. I am ready to prove that the use of the forceps once in seven or eight cases is not justifiable.

Dr. Boisliniere:—I think Dr. Johnston is right. Perhaps, once in seven cases of ordinary labor would be excessive. My practice has often required of me, in consultation cases, to make two or three applications of the forceps in one night; but in ordinary cases, I should not probably do so oftener than about once in ten or twelve cases.

Dr. A. C. Bernays:—I will mention to the Society what is known in Europe as the *golden-forceps*. In well-to-do families, when a physician attends a labor case, he sometimes applies the forceps just when the head is about to be born and thus terminates the labor. This is called the "golden forceps," because the fee is very willingly paid on account of the quick and easy labor. In Germany, it is considered quite justifiable, when the head is just within the vulva, to put on the forceps and thus expedite the matter.

Dr. Hughes:—I would briefly allude to a theory which has been brought forward attributing cases of insanity to prolonged compression of the head in the inferior strait during labor. It appears to me that there is some force in this objection to permitting the labor to be prolonged and thus to cause long-continued compression of the child's head, when by the use of the forceps the pressure might be promply relieved.

Dr. Maughs:—In answer to Dr. Johnston's question, I will state that I suppose I use the forceps once in every three or four cases.

June, 8th, 1878.

Ulcerations of Stomach.

Dr. Wesseler.—Four weeks ago I stated that I believed I had two cases of gastric ulcer. One of these cases succumbed last night. The patient was a man twenty-nine years of age, who had been treated by different physicians in several places. He had traveled a great deal and led a very fast life. He came to St. Louis and was treated by a physician here, who, after three or four weeks, sent him down to the City Hospital to me with a note stating that the case was one of cancer of the stomach. The The patient was vomiting constantly, but there was no constipation. He had usually had a daily passage from the bowels, but a week ago a diarrhœa supervened, which became colliquative

and carried him off, the vomiting meanwhile ceasing almost entirely.

At the autopsy we found a pyloric ulceration and the liver studded throughout with cancerous nodules. The liver was much enlarged, so as to push the stomach over to the left side. The stomach itself was apparently enlarged. During life there had been so much tenderness in the epigastric region that we could not determine the presence or absence of intumescence within the abdomen; he would not allow sufficient pressure to be made. He had vomited blood, and been sick eight months, and from this, and his habits of life, I concluded he was suffering from gastric ulcer, and was slow in making a diagnosis of cancer.

I gave him half grain doses of nitrate of silver, a grain of opium at night, and during the day milk and lime water. I allowed him ice cream, occasionally, and strawberries and cherries, sometimes, as he craved something acid. No other organs were involved by the disease that I could discover. Here we see the well-marked cancerous deposits, but there is no thickening of the stomach; there is an ulcerated area, but nothing of that dense infiltration we generally see. The man had suffered from dyspeptic symptoms for several years. Cancer of the liver was not diagnosed. I must state that I only treated the patient while he was in a dying condition.

DR. LUTZ:—In this connection I would like to say a word or two about the treatment of gastric affections, more particularly when there is pyloric obstruction. Of late I have treated several cases by administering the Carlsbad salts, which consist of a mixture of sulphate and carbonate of sodium. A drachm or two of the salt is to be administered in a pint of lime water before breakfast. The rationale of this treatment has been stated to be, that in all gastric affections it is necessary that the acid fermentation be checked, and that the stomach empty its contents at least once in twenty four hours. The experience of various practitioners seem to prove that this saline mixture does arrest the acid fermentation, while from its alkaline nature it must neutralize existing gastric acidity, and it also excites the peristaltic contraction of the stomach, causing it to disgorge its contents into the intestinal canal.

Of course this emptying of the stomach and neutralization of the contents are only adjunctive measures of treatment, many other things have to be attended to.

Of late I have treated several cases in this way. I have now under treatment, a woman about thirty five years of age, who has been vomiting from time to time for a considerable period, and who has been affected with great flatulency and obstinate constipation. I tried many of the usual remedies before resorting to the Carlsbad salts. Formerly very drastic purgatives were sometimes required to move her bowels, but since she has been taking the salt, she has had a free evacuation daily.

I do not mean to imply that the use of these salts is altogether a novelty, even in this country; I allude to it particularly, because at a late meeting of the Society when the subject of gastric ulcer was extensively discussed, no mention was made of the Carlsbad salts.

Dr. Prewitt:—The interest of the case reported by Dr. Wesseler, centers, I think, in the illustration it affords of the obscurity of the diagnosis in cases of ulcer of the stomach. I am not surprised after looking at the specimens that Dr. Wesseler should have supposed it to be a case of simple gastric ulcer. In fact it is an ulcer of the stomach, though it happens to be a cancerous one. Such an affection may present many characteristic symptoms of simple ulcer. The doctor is unable to give us any history of the case, so far as the character of the hemorrhage is concerned. This point is often of great consequence as regards the diagnosis. In cancer of the stomach, the bleeding is much more likely to be in small quantity, and of frequent occurrence; in ulcer of the stomach, it is apt to take place at longer intervals, but to be profuse when it does occur. In this case there is some distinct induration and modulation about the pylorus, not enough, however, to have been readily felt through the abdominal walls without very careful manipulation, which the patient would not tolerate, it seems. It is difficult to make out by palpation as small an amount of induration as existed in this case, if the patient is fat or the abdominal walls thick.

Dr. Wesseler:—As nearly as I could ascertain, the vomiting of blood occurred at long intervals, the patient at the same time, never suffering from constipation.

Chronic Croupous Bronchitis.

Dr. Glasgow:—I understand that some weeks ago, Dr. P. G. Robinson presented to this Society a specimen derived from a very rare disease, viz: chronic croupous bronchitis. It has been my good fortune to procure from a friend, a similar specimen with a history of the trouble. This specimen, which I now exhibit, was considered at the late meeting of the American Medical Association in Buffalo, as one of the finest ever seen in this country.

The young man is seventeen years of age, pale, and somewhat emaciated. He has suffered from time to time during the past eighteen months, with great dyspnœa, relieved by the occasional coughing up of these casts. About a year ago, he suffered intensely with a peculiar feeling of confusion in the head; he was very nervous, and felt as if he could not remain quiet within doors, and would go out and run a long distance. During this period, he expectorated two large casts, and thereupon apparently recovered his self-possession. These symptoms, to my mind, were evidently due to defective aeration of the blood. In

March last, he expectorated two smaller casts, and has been more or less under the weather since, until about three weeks ago, when he had a severe chill. This was followed by fever and several violent paroxysms of coughing. In the first paroxysm he brought up one of the casts which I have shown. In the second paroxysm, the other. The fever then subsided and he has had no return of it since; there is now no dyspnœa, and he considers himself well.

Primary chronic croup is generally accompanied by hemorrhage; but in this case there has been no hemorrhage. I have never seen the patient but once, and, therefore, cannot give the details of treatment. On examination, nothing was to be seen in the larynx or in the trachea, though I was able to get a clear view of this tube to about one half of its length. There was suppressed respiration in the lower lobes of both lungs, near the angle of the scapula; on the right side a few notes could be heard. There was no dullness, in fact, very little that could be called abnormal, except the suppressed breathing over the lower lobes. The specimens were photographed on the same day that I received them, but they are now somewhat softened. A point in this case seems to confirm certain statements regarding change of climate in this affection. The patient is a farmer's son; when in the country he is comparatively well, but as soon as he comes to town he begins to suffer. The standard treatment is with iodide of potassium in conjunction with inhalations of lime-water by the atomizer. I should like to hear the results of treatment from any one who has had practical experience in this disease.

DR. ENGELMANN:—I have had occasion lately to look into the literature of this subject, and as the Doctor remarks, the cases are rare. As far as I have been able to determine, the treatment also, has been exceedingly unsatisfactory in most cases.

I have seen a case in which one of the larger bronchi of the right lung was affected, or possibly all of them. The case was examined quite thoroughly; of course, percussion revealed nothing, but auscultation showed a decided impairment of the respiratory murmur below a certain point on the right side. After expectoration of the casts, the passages apparently became free, but were very soon closed again. The case was one of secondary croupous bronchitis, distinctly localized, occurring in a patient affected with cancer of the ovary, who was failing rapidly. About three weeks before the death, she began to expectorate very perfect casts three to four inches long. The main branch was so occluded that it would barely admit a lead-pencil; perfect casts of it were expectorated more than three or four times. I suppose the smallest bronchi were about the size of half the thickness of a lead pencil. We tried expectorants, but as the patient was rapidly failing from the cancer of the ovary no formal treatment was instituted for the bronchial trouble.

Dr. Prewitt asks in what sense the affection could be desig-

nated as secondary. I may have used the expression somewhat unadvisedly, but the leading feature in the case was the cancerous cachexy. Whether the bronchial disease was secondary to this, or simply accidental, I cannot say. The patient, however, expectorated these casts constantly, several dozen altogether, I suppose. There was no hemorrhage during the progress of the affection, from the air passages.

Dr. Wm. Porter:—The specimen just presented is one of the most interesting of its kind that has been preserved. There is no doubt that many casts are lost, as they are often expectorated in small pieces, coming away during emesis, perhaps and there has not been much literature to direct the attention of physicians to the subject. Among the cases recently noticed is one presented by Dr. Beverly Robinson, to the New York Pathological Society, and the one reported by Dr. P. G. Robinson in our own Society last week. Most of the few casts I have seen were of a larger calibre than this one, but none of them entered so minutely into the smaller bronchial tubes. The exudation is doubtless of a croupous nature, and when examined under the microscope is seen to be laminated, containing very little débris and few epithelial cells. In making an autopsy some years ago, I accidentally found a membranous cast about the diameter of a small lead pencil, which completely filled the bronchial tube and extended into some of the smaller branches. The tube in which this cast was found was dilated, part of the epithelium had been destroyed and in one place there was an ulcer. The disease had evidently existed for some time, though the only history I could get was from the nurse, who said he expectorated a great deal. He died from a traumatic injury and his lungs had not been examined prior to death. In two cases, I think, I used with good effect, sulphate of zinc, in one and two grain doses, combined with other tonic treatment. One of these passed from under my care and eventually died, though I am certain, his symptoms were much ameliorated while taking the zinc. The other case did well for a while; the patient now and then expectorating a cast. After awhile they ceased, but having hemoptysis he became alarmed and went to Colorado, where he has quite recovered. I gave the sulphate of zinc on account of its tonic and astringent properties, as well as for its corroborant influence upon the nervous system.

Dr. Newman:—In speaking of the signs on percussion, in the case Dr. Engelmann reported, he observed that they were entirely negative, *as a matter of course*. I was not prepared to hear this, for it occurred to me that we might have expected an obstruction of a considerable part of the lung to exist so that air could not enter it. I should suppose the sound on percussion would be dull in consequence of the inability of the air to penetrate to the air-cells.

DR. GLASGOW:—There were some portions of the lung which were obstructed, but not sufficiently so to produce dullness on percussion.

DR. ENGELMANN:—I think the explanation is quite correct. There is hardly enough collapse or infarction of the lung-tissue to produce dulness on percussion. In my case, I do not certainly know that the patient was too feeble to expectorate perfectly, but all the masses that were expectorated came from precisely the same place. Each fragment was as large as a medium-sized lead pencil, with several ramifications, and never longer than three and a half or four inches. As their pattern was always the same it seemed quite certain that they were derived from the same air-passages, and that the disease was limited to a definite area of the lung, however improbable this might seem at first sight.

An interesting consideration in cases of this kind, is the distinction between croup and diphtheria, which they render evident. On post-mortem, some residual matter was found in the affected bronchus, but the mucous membrane lining it was scarcely affected. It was not thickened,—perhaps it was a little injected; it was somewhat more succulent than that of the corresponding bronchus on the other side- but it was smooth and perfect. Now although croupous pseudo-membranes were constantly cast off from the surface of this mucous membrane, it retained its anatomical integrity, while in diphtheria, the deposit occurs within the thickness of the mucous-membrane itself, which is thus rapidly destroyed.

DR. MUDD:—I do not understand how perfect casts from a tube, three or four inches long, without more than two or three ramifications could be expectorated; I do not know from what part of the bronchial tube they could be derived from.

DR. ENGELMANN:—The entrance of other tubes into the larger bronchus was indicated only by small openings. There is no cast joining the main one, probably because the smaller bronchi were not diseased, or at any rate nothing was furnished by them at the time.

DR. PREWITT:—A gentleman who spoke of these cases has said, that all the cases, excepting one referred to by Dr. Porter, got well; that is they did not die. The first case of this kind that came to my knowledge, was one of a Dr. Wilson, reported in the ST. LOUIS MED. JOURNAL for 1869. In that case, casts were expectorated for months, but the patient did not die. In this fact, we find a marked distinction between croupous and diphtheritic affections. Within the last few years we have had no end of dissertations upon the identity of diphtheria and croup. A few years ago one of our leading authors wrote to prove a clear difference between the two affections, yet he has since retracted what he had said, and has delivered a lecture in which

he maintains the strict identity of the two diseases. This, I believe, is the general teaching in Europe upon the subject.

Now we know that one of the characteristics of diphtheria, is its poisonous influence upon the system. Yet none of these chronic cases under discussion presented any symptoms of paralysis; none showed anything beyond local trouble, and certainly no one would ever suppose them to be allied in nature to diphtheria. If, nevertheless, it be affirmed that they are diphtheritic, why then should it not be said that croup,—which furnishes almost identically similar casts, though from the upper portion of the air tubes mostly, is also diphtheritic? I consider this an important query in the pathology of this matter, because the treatment depends, to a certain extent, upon its answer. No one would think of resorting to a depressing treatment in diphtheria, yet it is often instituted in croup, and, as many practitioners affirm, with the best results. Practitioners in the United States and elsewhere, long treated croup without knowing that such a disease as diphtheria existed, yet we are told by many pathologists that the two diseases are of identical nature. It seems to me that the specimens before us are a sufficient answer to any such doctrines.

Dr. Glasgow—I think that Dr. Prewitt assumes the identity of croup with the chronic bronchitis we are now considering on the basis of his remarks. This is not altogether legitimate. Croup is an acute disease; this is essentially a chronic one. The symptoms are not only widely different, but the secondary sympathetic disturbances are likewise wholly dissimilar. The false membranes may present a similar microscopical aspect, but they make their appearance amid a wholly different train of symptoms. So that I do not think it possible to argue from the symptomatology of a chronic plastic bronchitis with reference to the vexed question of the relation of diphtheria to croup.

Several gentlemen have spoken of the results of treatment in these cases. If they consult the records on the subject, they will find that the disease is fatal. It may be so in two ways, either by progressive asphyxia through stoppage of the bronchial tubes, or if it lingers, the patients die of phthisis.

Dr. Prewitt:—Do you believe in any identity between croup and diphtheria?

Dr. Glasgow:—No sir, I do not.

Dr. Johnston:—I believe that most writers on this subject regard diphtheria as primarily local, and claim that the disease peculiarly affects the back of the pharnyx and upper portion of the trachea, where exudation first becomes manifest. It is affirmed that diphtheria is known under two principal forms, viz., one of prostration, apparently in consequence of an overwhelming of the nervous centers by some unknown mode of

intoxication consequent upon the blood-stasis and exudation, and the other, commencing in a more definite reaction with an exudation of plastic matter which may attain a higher grade of organization. If we assume a previous constitutional derangement, dependent upon some unknown poison, and that a certain portion of the mucous membrane is more liable to this exudative action than the rest, we get the group of symptoms known as diphtheria. This disease may attack both old and young; it does not especially select the young, and once established, it may spread along and down the mucous membrane and present itself as a tracheitis simulating primary croup. Now, is this latter form of disease, a separate and distinct disease from that we have been in the habit of terming croup?

When diphtheria takes on this form, an active inflammation with exudation within the trachea occurs; if with our remedies, we can arrest its progress, then we can cure membranous croup. But the statistics do not encourage us, for they show, that out of every twenty cases of membranous croup, nine or ten die, whether treated or not, and however treated.

As regards the utility of sulphate of zinc, in chronic plastic bronchitis, if this is but a local disease, depending upon nervous debility, Dr. Porter's zinc treatment is admissable. As the disease is essentially chronic in character, sulphate of zinc being an excellent local tonic, ought, undoubtedly to prove useful.

Dr. Porter:—I do not advocate sulphate of zinc as a universal remedy in these cases; though I have had good results in two instances and would possibly use it again, yet the number of my cases is not sufficient to warrant any conclusion. Dr Engelmann has just spoken of these casts as an exudation on the *surface* of the mucous membrane; while this is true in theory and in the early stages or pseudo-membranous bronchitis, yet, when the cast has been renewed and removed repeatedly, erosions, and finally ulcerations of the mucous membrane of the bronchial tubes follow, and from this cause comes, in some instances, the hemorrhage, which often accompanies the other symptoms.

Dr. Ford:—One of the first effects of the exudative process is a loss of the epithelium as a consequence of the inflammation and succulence of the mucous membrane, if indeed, the epithelium has not already fallen before the exudation is poured out. I have on a former occasion, laid especial stress upon the rôle of this loss of the epithelium in the formation of ulcers of the stomach, whereby the irritant and chemically acting gastric juice finds unobstructed access to the subjacent tissues. In the air passages, the consequence of a loss of the protective epithelial layer will be quite similar, and abnormal secretions and toxic fluids resulting from decomposition of the exudate, will promptly irritate and excoriate the uncovered mucous membrane, eventu-

ally inducing and maintaining ulceration if the case be sufficiently chronic.

Dr. Engelmann:—I think that is a correct view. As Dr. Porter has observed, in the course of time, the mucous surface becomes abraded and if the disease continues, ulceration will probably ensue.

Dr. Hughes:—Dr. Prewitt used an expression which was perhaps unintentional: he said, I thought, "that the exudation of diphtheria poisons the system." Did he intend to say so?

Dr. Prewitt:—I do not recollect having made the assertion, but I have no objection to doing so. A diphtheritic exudation will readily poison the system, and I venture to say that if the doctor would abrade the surface of his arm and place some diphtheritic exudation upon the abraded surface, he would shortly find his system thoroughly poisoned.

Dr. Hughes:—I am willing to concede that the exudation of diphtheria may produce an irritation, and if you please, a local poisoning of the system. But if the doctor maintains that it could produce that constitutional poisoning, which is the cause of the depression of the nerve-centers; if he will maintain that this is due to absorption of this exudation rather than that the exudation takes its origin in the empoisonment of the system, I am compelled to take issue with him.

Dr. Englemann:—I cannot see why the system should not be intoxicated by poisonous fluids due to the decomposition of the exudate in contact with the mucous membrane. In case of abortion with retained placenta, or retention of fragments of placenta after delivery, such masses decompose, and we know that systemic poison directly originates therefrom. Why, therefore, should not a similar intoxication take its origin in absorption of decomposing deptheritic detritus, and the exudate be in this way the direct source of the systemic infection?

Dr. Hurt:—I wish to allude to an interesting point in connection with the case reported by Dr. Glasgow, which seems to involve a difficulty. From the specimens and photographs of the bronchial casts that gentleman has shown to the Society, we are almost obliged to conclude that the entire bronchial tree was occupied and nearly or quite occluded by the casts. But yet the details show that the patient survived; that the blood was by no means imperfectly oxidized, and we are forced to conclude from the appearance and quantity of the specimens, that when they were *in situ*, the bronchial passages must have been nearly or quite impervious to air; nevertheless, the atmosphere did continue to reach the lungs and blood.

Comparing the photographs with diagrams of the bronchial

tubes such as we see in anatomical works, we would naturally conclude that the bronchi and their ramifications were wholly occupied by the mass. The specimens necessarily consist of the epthelial covering of the mucous membrane commingled with exuded matter, which I must imagine could not have been sufficient in quantity to fill up the tubes; had this been otherwise, prompt asphyxia would have been inevitable.

JUNE 15th, 1878.

Placenta Prævia.

DR. BAUDUY:—I have a case to report which I desire to bring under the consideration of this Society, for my own enlightenment in reference to a sad occurrence in my practice, yesterday. It was a case of placenta prævia, and it is my third experience of the kind.

I was called upon in my office yesterday by a midwife, who requested my attendance upon a woman at full term, who had had a severe hemorrhage at eight o'clock in the morning. Being unavoidably detained, I could not go before two o'clock; and upon approaching the bedside, I found the woman almost unconscious, having lost an enormous amount of blood. She was in a condition of terrible prostration, cold, and her pulse almost imperceptible; but she had rallied a little since her second hemorrhage. I found my friend Dr. Thomas Scott present, who had been sent for in my absence. He said that immediately before the second hemorrhage set in, she seemed moribund, and that there was little or nothing to do. Two hours had elapsed since this hemorrhage had occurred; some reaction had shown itself; inasmuch as the pulse had certainly been established to such an extent that it was not only perceptible, but I think was quite fair, considering the immense amount of blood that had been lost, I determined immediately to make an exploration. I may here state, as a very curious coincidence, that exactly three years ago I was summoned to the bedside of this woman, who was then in a similar condition. She had on that occasion, lost an immense quantity of blood; but the hemorrhage had been preceded, as it often is in these cases, by frequent hemorrhages during the eighth and ninth months. But upon making an examination, I found a central presentation, and determined to dilate and empty the uterus as rapidly as possible, which I did with good results. I first tore up the attachments of the placenta, as is recommended by Simpson, and strove to pass my hand down the side of the placenta, but as rules are one thing, and experience another, I did not succeed in doing what I desired. Everything felt like a fleshy mass; at any rate, I got hold of a foot, turned and delivered; and upon examination of the placenta after delivery, I found a large hole through its central portion, which I had made, and through which I had pulled the child. Although it is rec-

ommended, as I am well aware, in this case, to pass the hand along the peripheral portion of the placenta, I think it is often easier to try, than to accomplish this manoeuvre. I published this case in the April number of the *St. Louis Medical Record* of 1875. Knowing that this woman, to whose bedside I was again summoned yesterday, had had this terrible hemorrhage before; knowing that my previous treatment had been successful, and that she had had a good recovery, I confess that I leaned very decidedly towards pursuing the same treatment yesterday. Of course I had my doubts as to the propriety of the operation; yet at the same time, the emergency was of such a terrible character, that I allowed myself to be swayed by my previous success on the same patient, and also by the impulse of my early training, which is very apt to influence our judgment in emergencies. My old preceptor, Dr. Meigs, was unconditionally in favor of turning in these cases. I determined, however, that I would proceed cautiously, and therefore inserted my left hand, intending to tear up the attachments of the placenta wherever I could possibly reach them. Not simply practicing Barnes's method of detaching the peripheral portion of the placenta only, and convinced, moreover, from past experience in the very same patient, that a detachment of the placenta would promptly check the hemorrhage, I determined to detach the organ wherever I could reach it.

The recent observations of Dr. Wynn, of Manchester, show that the mortality to the mother by this method, was one in three cases, and one in two to the child.

Inserting my hand, therefore into the uterus, I broke up all the adhesions of the placenta, and passing into the uterine cavity, I seized the foot, and delivered the child as rapidly as possible; there were barely two spoonfuls of blood lost.

It has been a matter of great concern to me, as to whether if I had pursued a different course, and had waited for complete reaction, the result which I am about to state, would have occurred.

There was no particular difficulty in the version; no subsequent hemorrhage occurred; the uterus contracted well, even powerfully, and after remaining with the patient for perhaps an hour or an hour and fifteen minutes, Dr. Scott and myself left her in the charge of one of the the most experienced midwives in the city. About fifteen minutes after reaching my residence, I received word that the hemorrhage had recurred, and upon arriving at the bedside, shortly afterward found her dead. I questioned the midwife as to whether there had really been any further hemorrhage; she postively assured me that no hemorrhage had occurred. I found upon questioning the midwife, that my injunctions had been most faithfully followed; that the patient had not moved in bed, nor done anything to increase her exhaustion. Stimulants had been carefully administered, and the foot of the bed remained as we had left it, elevated about a foot. My

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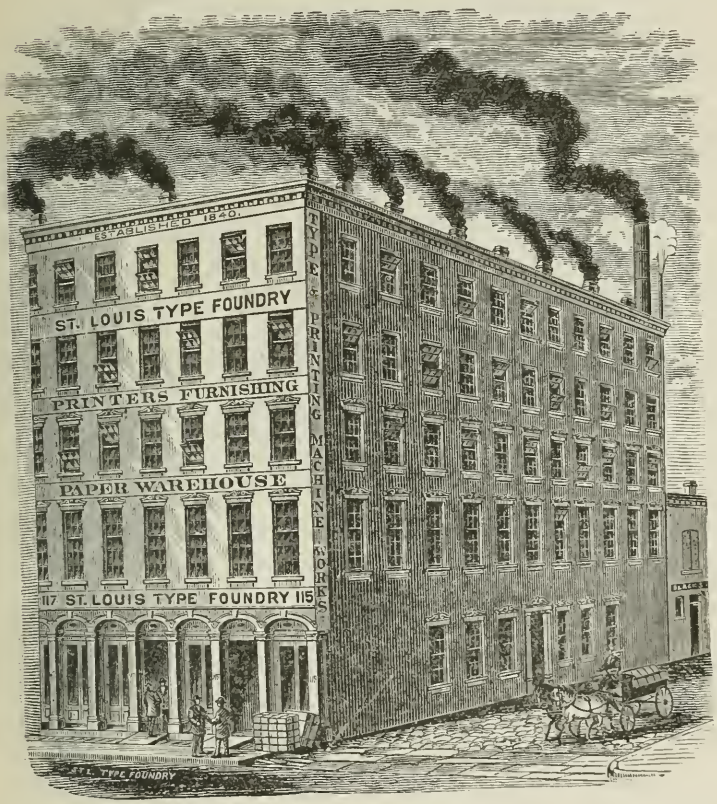

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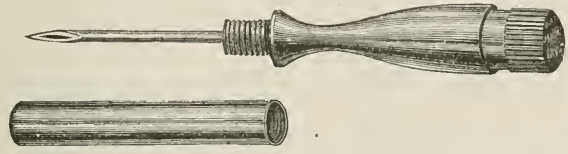

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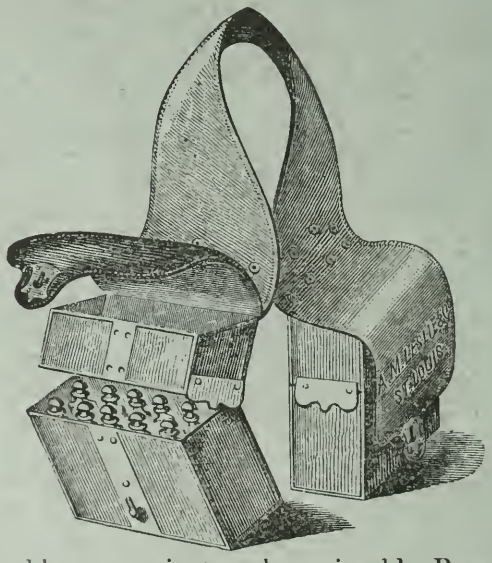

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